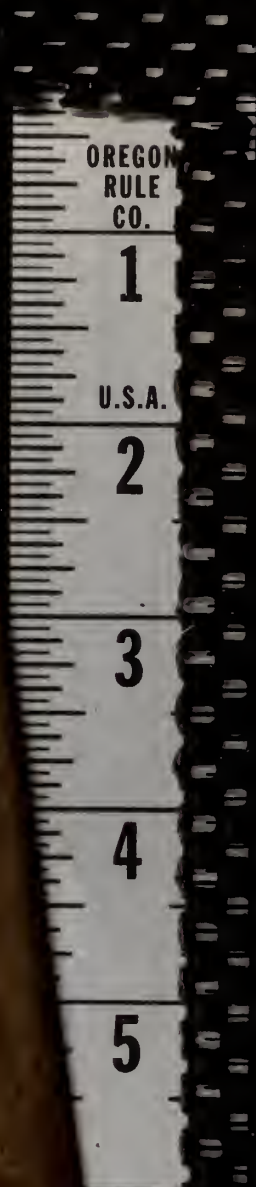


NORTHWEST TERRITORIES
V. 12 (1954) - V. 19 (1962)

PROPERTY OF ALBERTA ARCHIVES	
Accession No.	93-20
Unit No.	9
Box No.	1



THE NORTHWEST

Technocrat

July '54

IN THIS ISSUE:

- Labor's Past and Future
- The Great Migration
- The Challenge of Change
- Howard Scott Tour
- Super-Inch Pipe

No. 176 (Vol. XVIII)



Sec. 3, R. D. 12247
TECHNOCRACY INC.
Seattle, Washington





A PROBLEM CLEARLY STATED . . .

IT HAS been said that a problem clearly stated is half solved. Through the past twenty-one tough years Technocracy, under the capable directorship of Howard Scott, has been hammering with facts at the intelligent few North Americans to make them conscious of the precise nature of the greatest problem ever to confront a civilization—the technological revolution on this Continent and the probable consequences to its residents.

Long before the public ever knew Technocracy existed, the leading technologists of North America were conducting an inquiry into the changing social scene. By far the most difficult task this group had was defining through research the fundamental problem. Because the cause of social change was found to be the impact of technology on the social structure, the synthetic or problem solving phase of Technocracy is a direct outgrowth of the nature of the problem.

Technocracy is no more controversial than the force of gravity. But that does not prevent many from calling it a 'pipe dream' or 'a good idea that would never work.' Why?

The great majority of individuals who come in contact with Technocracy fail to grasp the analytic phase of Technocracy. Only in a vague sense of the word are they aware of what is happening to this civilization and why. Sure, they know that there are problems that probably should be solved but they see only surface problems such as piles of spuds that really shouldn't be piled up to rot like that; and now they are beginning to understand that war is what keeps them working, which isn't too comforting to some of them.

Technocracy Inc. is building a social movement for Technocracy for a far more important reason than the disgraceful fact that 400,000,000 pounds of butter has been stored by the government to keep it away from the citizens of this Continent. This North American Price System is so lousy that it's

threatening the lives of all citizens on this Continent.

An individual with a pain in his side goes to a doctor, for what? Consultation, of course. If the examination reveals appendicitis, the appendix comes out. Maldiagnosis by a quack may kill the patient.

Much is being said today by quacks about the pains and symptoms of trouble in North America, but little is being said about their cause. Technocracy Inc. is acting as a source of consultation for the public on why this society is being pitched into a tailspin.

It is the policy of Technocracy at this time to state and re-state the problem. For without a full understanding of the problem, Technocracy's answer, being founded in the problem, becomes controversial among individuals or 'a good idea that would never work.' Technocracy is a technological solution to a technological problem. Scientific fact does not allow room for argument.

It takes mental toughness gained through adherence to fact to build a social movement for Technocracy. To understand Technocracy, start at the beginning with the problem, not in the middle with the solution to a problem not yet understood.

—Harry Briggs, 12247-1

COVER PICTURE

ROSS DAM AND POWERHOUSE

Seattle City Light's 270,000-kilowatt Ross Powerhouse completed in early 1954. Each of the three gigantic generators, although rated at 90,000 kilowatts, have been producing over 110,000 kilowatts. With the fourth generator recently authorized the plant will have a maximum power producing capability of 440,000-kw. Another addition to the Continent's extraneous energy to compete with man-hours.

Photo Courtesy of Seattle City Light

JULY 1954

THE NORTHWEST Technocrat

Labor's Past and Future

Labor has had a long hard fight to gain a place of respect in society for its members. Now, it approaches a period of uncertainty and apprehension about the future. Is this to become a period of crisis or opportunity? It's up to Labor.

LABOR, as a social movement, was organized out of the underprivileged working class as a protection against the outrages of the over-privileged Leisure Class. It took a long, hard fight and much bleeding and dying for the workers to gain even the privilege of organizing for their own welfare. The Leisure Class which lived parasitically upon the efforts of the Working Class resented with sadistic ferocity any improvement in the comfort or economic well-being of the people who had to work hard for a meager living. Except for use as work engines and as an adoring clique for their superior masters, the working people had no legitimate excuse for being around, in the view of the Leisure Class.

Since the working class was much larger in numbers than the leisure class—it had to be when almost all of the work was done by human muscles—it constituted a threatening hazard to the position and wealth of the Upper Class. This was recognized as a very grave potential danger in the event that Labor should ever organize and become unidirectional in its social demands. Therefore, every method known was employed to prevent or render impotent any organizing of Labor for the acquisition of social advantages for its members, individually or collectively.

For the members of Labor, the immediate needs of the moment were so urgent that the collective struggle took on the form of tactical maneuvers to gain minor, local advantages. There appeared to be neither the leadership concepts nor the mem-

bership cohesion to fight for long-term strategical objectives. This limitation could be attributed to inexperience during the early part of the struggle, but not so later on. In fact, there are many instances on record where the strategy of Labor became so perverted by short-term expediencies that the workers openly fought against the installation of technological equipment and processes which would have relieved the human muscles of much toil and shortened the hours of work. The Labor movement, from an early period, tended to degenerate into local partisan struggles between the workers and the financial manipulators.

That the members of Labor now work only half the number of hours they did formerly, that they have a much higher standard of living, and that they have safer and less toilsome work to do are only partly the effects of Labor's organized struggle. Far more credit must be attributed to the coincidental advancement in technology which multiplied production at the same time it reduced the man-hours of toil. Shorter work-days and work-weeks, more comfortable working conditions, and higher pay could be afforded by Management without significant diminution of profits once technology was installed to do most of the work, and these advantages were granted as appeasements to Labor on a tentative basis. Fortuitously, during World Wars I and II, both the technological installation and the improvement in the lot of the workers were accelerated—albeit, at public expense and with inflated

profits accruing to investors. It was historical circumstance and advancing technology rather than any strategic foresight on the part of Labor's leadership that the standard of living of the American and Canadian workers are the highest in the world.

When Labor did succeed in gaining the right to organize into unions, every effort was made to keep the unions as weak and divided as possible. Business favored company unions over trade unions; for, it was easier to deal with company unions on a local and piece-meal basis. But, once it had to accept trade unions, business favored several or many unions in preference to only one. Some of the more competent Labor leaders envisaged only one great union for all of Labor; but every effort to achieve that goal has been successfully sabotaged up-to-date. The Industrial Workers of the World, the most militant labor organization this Continent has ever seen, attempted to organize Labor on the One Big Union principle, but it was effectively crushed. Management ganged up on the I.W.W.; the rival American Federation of Labor fought it; and, finally, the government of the United States stepped in to administer the coupe de grace when the 'wobblies' failed to display sufficient enthusiasm for American participation in World War I.

Internecine Fights

The ranks of Labor have frequently become disrupted with internecine fights and jurisdictional disputes arising out of rivalries between major union federations or between federations and unaffiliated unions. The Committee of Industrial Organization was founded by John L. Lewis as a more aggressive Labor body than the easy-going A. F. of L. During the great depression of the Thirties, the C.I.O. made sweeping gains; but, then, Lewis turned Republican and resigned from its leadership after a feud with the Roosevelt New Deal, leaving the C.I.O. in the hands of Roman Catholic Phillip Murray. Since then, the C.I.O. has tended to become even more reactionary than the A. F. of L. There is at present no radical Labor movement in the United States or Canada.

Rather than be aggressively revolutionary in their concepts, or even steadily progressive in their objectives, Labor leaders appear to have become content to abide by the status quo and avoid social change—for the worker as well as for the society as a whole. Labor leadership appears content to administer a static organization in a static society. Some of the top Labor leaders have acquired the income, have adopted the habiliment, and have

developed the behavior characteristics of the 'capitalistic bourgeoisie.' The policy of Labor has become so reactionary of late that some of the top leaders have issued statements in praise of corporate enterprise. This is partly due to a severe lack of strategic foresight, but also due in large measure to the fact that Labor is rapidly coming under the domination of Roman Catholic clericalism, a cult which opposes all social advancement. This influence has become so virulent that even those Labor leaders who do not receive their directives from Rome seek to outdo the Catholics in their reactionism out of fear of being labeled 'progressive.'

A Lost Cause

The Labor movement in the United States and Canada, in its traditional sense, is a lost cause. Neither society nor Labor can be static. Social change, unwanted and unplanned, is circumstantially the most rapid in history. Technology is displacing the worker as an instrument of production. From the viewpoint of Management, human labor is inefficient, slow, undependable, and very high in cost. The machine is infinitely more capable than the man of doing the job well, whether the work be skilled or unskilled. Albeit from purely selfish motives, Management is doing a great service to society by eliminating human beings from jobs of toil.

The only reason why there are now some 60 million jobs filled in the United States is because most people must have jobs in order to live under the Price System; and society has found it more expedient to provide jobs of some kind than face the alternative—fundamental social change. But it has now reached the point where, without a world war and huge debt inflations, there is no chance under the Price System of achieving anything resembling 'full employment.' The present political administration is scared into a panic over the prospects of world peace, and business is at least worried over it.

Labor has no answer for this dilemma other than government make-work projects, with emphasis on a build-up of armaments. The politicians have no answer other than World War III. Business has no answer other than World War III and cost-plus government contracts. The people of North America, as individuals, have at least a hundred million 'answers'—all personal in their application and of no strategic value to the Continent. There are many small-time economic evangelists preaching doctrines of money reform or revised methods of distributing wealth; but these all approach the prob-

lem with scarcity concepts and usually require a moral reformation of the individuals to make their schemes work.

Labor has been led into a strategy of struggling against Management for a larger share of the profits of business enterprise. These profits, naturally, must come from the consumers, either directly or indirectly, and the members of Labor make up a large segment of the consumers. In effect, it is a game of robbing yourself to pay yourself. This 'round-the-rosies' technique is getting Labor nowhere; for, as the wages go higher, the consumers must be made to pay more—much more than the actual increases in wages, for business and finance require a series of percentage markups, too. This process results in the wage-earners, as consumers, being able to buy less although they have more dollars to buy with.

The only reason that the workers appeared to be getting ahead of the game during recent years was the \$300 plus billions of credit that the governments of the United States and Canada went into debt for during the war, part of which trickled down to Labor. This increase in wages and profits was made possible without the consumers having to pay for it first, so it seemed like manna from heaven. Nevertheless the debt is still charged to the consumers. Theoretically, the payout is to come in the future—principal plus interest. But our guess is, those little pieces of engraved paper called Government Bonds eventually will be worth more as souvenirs and ornaments than as purchasing power, although they may be re-issued several times before their status as such becomes generally recognized.

Cost of Living

Twenty dollars a day appears to be a high wage for Labor compared to rates paid only twenty years ago. However, if the worker becomes unemployed, a twenty dollar a day wage is no better than a five dollar a day wage; in fact, not so good, since the cost of living will have become gauged to the \$20-a-day scale and it will cost four times as much to survive the 'period of unemployment.' During the 1930's, the Roosevelt administration could buy off a family for \$24 a month in the form of direct relief payments, or \$54 on WPA. Now, a family on unemployment compensation finds the going 'mighty tough' on \$30 per week. The Great Depression of the Thirties was a very cheap depression compared to any that the present or future administrations will ever encounter. The cushion of

unemployment insurance funds will quickly melt away under any large-scale disemployment.

Before any benefits can be paid the workers by either Management or Government, they must be underwritten by the consumers, either by direct payment or pledges of future payment. The obligations of the American consumers now exceed half a **trillion** dollars and the end is not in sight. If you want the government to subsidize you—as a worker, as a reliefer, as a businessman, or as anything else—remember that you, collectively, first must sign a note of indebtedness that amounts to several times the amount of the subsidy you receive. For example, for Labor to receive subsidy through government expenditures for armaments is like promising to pay a dollar later for a dime received today. It may be worse than that; for, with the automatic machinery and improved efficiency developed in the armaments industries since World War II, Labor's take from an armaments build-up program is not what it used to be.

Major Error

One of the major strategical errors of Labor has been its quest for political favors, perhaps even a greater error than that of seeking to compete with Management for the profits of Free Enterprise.

Politicians, while seeking plush offices for themselves at public expense, often praise Labor and deplore the 'injustices' with which working people are afflicted. But, as soon as election is assured, the politicians turn their ears to the lobbyists of big business, and thenceforth the legislation which they support is that which favors business. In other words, the politicians speak in support of Labor where the most votes reside and act in support of business where the 'plush' comes from.

Particularly in recent decades, Labor has been led into playing footie with politicians and political parties in an attempt to gain pro-Labor legislation. By endorsing politicians and political parties, Labor has had to make numerous compromises with its issues, programs, and policies, and to accept much that it did not like because it came in a 'package deal' with the political promises that were used to lure the vote of Labor. Naturally, the politicians pay little respect to their promises to Labor once the election is over. As proof of this assertion, the Taft-Hartley Labor Law is still on the books.

Politicians have not actively supported Labor despite numerous promises to do so; rather, they have double-crossed Labor at every turn. Any gains that Labor has made on the political front have

come as appeasement measures to stall off social unrest. A few 'scared' politicians will speak out for legislation favorable to Labor just before re-election, but that is just for the record, not for the law books. Since many of the more outstanding compromises — unemployment insurance, minimum wages, rights to bargain with employers, etc. — were forced upon the Roosevelt administration during the exigencies of the depression, this administration has been labeled 'treasonable' by the proponents of Big Business, even though that administration's primary objective was to save business and prevent social change—next, of course, after keeping its own favored politicians in office.

Since Management has been traditionally Republican in its political party affiliations, Labor has tended to give its support to the Democratic Party. Consequently, in all large cities, especially where large numbers of industrial workers were employed, there grew up powerful Democratic political 'machines.' These had their coterie of ward heelers who circulated the residential districts of the worker population, giving the people a glad hand and, where politically expedient, retail dabs of material sympathy.

Payoff from the Racket

The primary objective of the political machine is keeping its own boys in office so as to receive the political payoff from the rackets. Labor has been disappointed repeatedly in the 'benefits' it received from the political machines, but still it has voted Democratic because 'anything' was better than having Republicans in office. Republicans have been viewed as the stooges of Management.

The objectives and behavior characteristics of the politicians and their machines is the same for both parties, the rivalry being a matter of whose boys shall hold office and collect the payoffs. In either case, the consumers will be taxed for all they will accept short of open revolt; the rackets will flourish; and Labor will be given the run-around.

The third class of elite parasites on the economy (business and politics being the first two) is the clerical hierarchy. We are not concerned here with the assessments made by the various church hierarchies on their memberships for things directly related to religious activities. That is a matter concerning them and their memberships. The point of interest that concerns us is the close tie-up between the clerical hierarchy and the political machines.

It so happens that in American political circles, especially in the large cities, the Roman Catholic

hierarchy is the most aggressive and unyielding in its tactics and the least scrupulous in its methods, with the result that nearly every large city Democratic political machine has become Catholic dominated. These machines, as well as the Church hierarchy directly, are closely associated with the crime and vice syndicates, particularly those of gambling and prostitution. The payoff from these sources is lucrative; and, although the vices are generally considered illegal, they are allowed to flourish sub rosa if enough payoff goes to the right places. In this connection, it is interesting to note how many of the vice czars and gambling kings in America claim allegiance to the Church of Rome. Senator Estes Kefauver, in his investigations into crime, pried a little too deeply into the organized rackets and turned up too many Catholic names; so, instead of his investigations serving as a political build-up, they played havoc with his political ambitions. It is true, a few sacrifices were provided with token jail sentences and fines to appease the public; but no concerted effort to clean up crime, as such, ever developed.

In the national election of 1952, Labor supported the Democratic candidate for president—at least the bulk of Labor's membership did. But the Roman Catholic dominated political machines of the big cities refused to support the party they nominally represented. The crusading candidate of Big Business won the election, mainly on the basis of a switch in allegiance of some three million Roman Catholic votes. It is obvious to anyone versed in the art of political analysis that the Church hierarchy, and with it the Democratic political machines, had sold out to the Republican Party on some kind of an undercover deal. Could it be that there was a gentlemen's agreement that the Republican Party would launch a Crusade to conquer and recover for Rome the vast areas now reposing behind the Iron Curtain? It would seem so!

Labor pinned its faith on the Democratic Party and the Democratic political machines in 1952, and Labor was double-crossed by its political buddies. Perhaps, the fact that Labor leadership was loaded with Roman Catholics had something to do with Labor's not waging as aggressive a fight in support of the Democratic candidate as it might have.

We may summarize the strategical blunders of Labor as follows:

First, it organized for a partisan fight with Management for the spoils of the Price System. This set up a civil strife within the population, for which there could be no reconciliation, and it tended to

work to the disadvantage of the people as a whole.

Second, it sought to gain advantages for itself by playing the political game, endorsing and sup-

MY TWO CENTS WORTH

I wish I knew what to do with my vacation this summer. When you work all year, you want to go some place where you can get away from it all; but the trouble is, wherever you go nowadays there are too many people already there to get it all away from you. It ain't much fun to go someplace to relax when the way you get gypped by everybody makes you so mad you don't enjoy your vacation at all. Sometimes I think I would just as soon stay home and take life easy for my vacation. But then, when the neighbors see you just laying around trying to relax, they think up all kinds of things to use up your time, even if it ain't nothing more than making you listen to their troubles and ailments.

I remember when I was young, we never had much money to spend on vacations and we always had a good time, except maybe for accidents. But as soon as people find some way of enjoying themselves without spending money, somebody else comes along and builds a fence around it and charges you admission. They say the best things in life are free, but that must only be propaganda because I always have to pay for everything that I consider any good.

I think the government ought to do something to help people enjoy their vacations like you read about them doing in some foreign countries. Maybe what you read is just propaganda too, but it's a good idea anyway. The government could use some of the ships they have no use for and take people on pleasure trips and they could build a lot of nice parks where people could go and have fun without spending a lot of money. Uncle Zeke says these ideas are socialistic and that ain't supposed to be patriotic. But I think the government ought to be of some use to the people. I can't see why you're unpatriotic if you want to have fun without getting gypped by every Tom, Dick, and Harry who wants to make a fast buck.

—Ima Moron

porting political candidates for office, in the hope that legislation would be written which would enhance the economic status of its members. This led to compromises of principle from which Labor has not been able to recover, and it has proved futile from the standpoint of results.

Third, it has let itself become dominated by agents of reactionism, with the result that it has become a defender of the status quo in the face of rapid technological and social change. In other words, it has failed to keep up with changes in the environment; and, now, Labor is faced with the fate of being automated out of existence.

As a consequence of these blunders on the part of Labor's leadership, Labor is rapidly becoming a decadent minority in American life. The 'benefits' for which it fought so hard are proving inadequate to sustain it in this time of crisis. Labor is organized, but it has no place to go, hoping only to hold on to the status quo for a little while longer. There are members of Labor who would almost welcome World War III, thinking that would bring 'good times' back again. They fail to realize that the Labor conditions of World Wars I and II have gone forever. War industries are becoming automated too.

The concept of a minority or partisan struggle is passe on this Continent. The strategy of seeking special advantages for a few at the expense of the many has been outdated by technological progress. It worked after a fashion in societies characterized by human toil and hand tool techniques. But in the technological complexity of modern America, minorities have no place and no future. That includes the Labor minority.

A Greater Concept

The future of North America demands social unity—a concept far greater and far more inclusive even than the One Big Union of the I.W.W. There can be no factionalism and no social strife. However, we cannot permit this to be attempted on the basis of a monopolistic, authoritarian seizure of power—the type of social structure now referred to as 'totalitarianism.' Whether it be a totalitarianism of the left or the right, it has no place in the New America. The strong totalitarian forces of the right that now nearly dominate American life are too close in pattern to the fascist totalitarianisms of Spain, Portugal, Argentina, and Eire; and they have become the greatest hazard to the future welfare of our citizens.

With the large-scale and all-inclusive technol-

ogy, high-powered and becoming increasingly more automatic, that prevails on this Continent, the social control cannot be delegated to any authoritarian cult or coalition of cults. Authoritarianism is the antithesis of science and technology. This is glaringly illustrated by the dearth of Roman Catholics in America who are outstanding in scientific and technological achievement. Roman Catholicism is the most monolithic authoritarianism on the Continent.

The authoritarians are in their natural element when the great bulk of the people are either slaves or down-trodden subjects, toiling long hours every day with their muscles. Technology has abolished slavery as well as third-class citizenship, and Authority, without those corollaries, can only wither and die. The day of the master and the whip are gone on this Continent.

The technology of North America requires that the social administration be a functional control, while it repudiates all theories of authoritarian dictatorship. The technology of this Continent specifies certain social consequences: (1) Abundance of goods and services for all residents of the Area; (2) Freedom from toil; (3) Standardization and integration of functional operations under balanced load on a Continental scale; (4) A minimum of arbitrary human regulation; and (5) Long range planning.

There is no physical reason why this Continent should not provide all the goods and services the population can consume. The materials, the energy, the technology, and the human skill are available (or at least soon attainable) to accomplish that result. The only things that stand in the way are traditional concepts of scarcity and financial investments in scarcity values. The Price System is the vehicle of scarcity traditions and scarcity values. Before we can have abundance, we must repudiate the Price System.

Freedom from toil is a condition to which every sane person has aspired, but only recently has its realization been made possible for a whole population. This has been done through the application of science and technology to the work of an Area. The moralists, the enslavers of human motivation, are howling with anguish as their pet instrument of torture, human toil, is being taken away from them. They have lied so long about the virtues of toil and the sinfulness of leisure that they almost believe it themselves. It is high time that the 'lower classes' had a chance to demonstrate what they can do without the deadening burden of toil, a

privilege which has always been reserved only for the upper class.

Standardization of goods and services permits mass production of the good things of life on a scale which enables their being made available to all the population. This could never be achieved by small-scale, heterogeneous production of a multiplicity of types. Standardization and efficient mass production for the Continent can be achieved only through a close integration of all Continental operations—procurement of raw materials, processing of materials, transportation, and distribution to the consumers. It cannot be achieved under separate organizational setups in each county, or each state and province, or even each major section of the Continent. In order to achieve the most with the least effort and confusion, it is imperative that the load be distributed as evenly as practicable over the hours of the day, the days of the week, and the seasons of the year.

When large-scale technology predominates in the operations of the Area, it is the requirements of the job to be done that determines what is to be done, where, when, and by whom. Arbitrary human decisions are reduced to a minimum in both variety and scope. At the same time, the techniques of reward and punishment, which prevail under conditions of scarcity and which permit the authoritarian regulation of human beings, cannot be applied under conditions of Abundance. The human can be conditioned to accept a pattern of behavior if it has a functional basis, but it will be very difficult to regulate him on the basis of anyone's mere say-so once the power of reward and punishment is gone. Thus, the individual human being will have gained the utmost in personal opportunity and selection of activities.

While it was possible to live from day to day or from year to year in a primitive society, it is no longer possible in a high-energy technological civilization. Many operations, such as the development of a watershed, the growing and cropping of forests, the construction of an inland waterways network, must be planned far in advance of their actual execution. No political 'planning' on a two or four-year basis can begin to approach the problem. The anarchy of business enterprise is too hazardous and wasteful as well as totally incompetent. The planning must be done on a Continent-wide basis, in conformity with the Continental requirements of the foreseeable future, and by technically trained personnel.

The strategy of Labor, if it is ever going to

amount to anything, must be in support of the above objectives for the Continent and for the welfare of all the people of the Continent—not just in support of a segment of the people in opposition to the whole. The strategy of opposing business Management in competition for the loot of business enterprise is retrogressive in its effects because, among other things, of the trend toward automation. Playing footie with politics is futile, for politicians are incompetent to do anything constructive in a power age, even if they should undergo a mutation and become inclined to do so. To sit tight on the status quo and oppose social change is the sure road to decadence and oblivion. To seek a world war involving atomic weapons is the most stupid strategy of all, no matter from what angle you look at it.

Labor has only one logical course to follow—to adopt a strategy of social change that is in keeping with the technological and social progression on this Continent. The vehicle for such a strategy is here, organized into a social movement, and widely disseminated over the Continent. It is not organized as a political reform movement, as a religious revival, or as an economic utopian scheme; it is not a One World panacea. It is technological in its concepts and approach to the problems of North America. It is endemic to this Continent and

is designed only for this Continent. It is the only organization in the world that is preparing the people for Abundance and Security. All other organizations are dedicated to scarcity or are so unrealistic that they must be regarded as 'crackpot.' This Organization to which we refer is, of course, Technocracy.

Technocracy has the only effective strategy for the New America, and it stands alone. It seeks no favors from and makes no compromise with the institutions of the Price System.

The members of Labor are welcome to join with Technocracy, as individuals and as organized groups, to usher in the Era of Abundance. Should Labor adopt the program of Technocracy, it would, for the first time, have a strategy consistent with the aspirations of its members. The 'payoff' to the individual would be the most in the way of goods and services for the least expenditure of effort and time, the reverse of the old traditional pattern of the least to those who provide the most effort.

Labor has the organization and the membership to make Technocracy a reality for North America. Technocracy is an opportunity greater than any previous dream of organized Labor. It is an opportunity that should be seized and not ignored.

—Wilton Ivie, C.H.Q.

JUNIOR ROBOTS

ROCKFORD, ILL. —The much-publicized push-button trend in industry is marching ahead on a far broader front than many of the communiqués tell.

While mechanical fingers busily help to turn out complex products like tractor engines, they're also making things as simple as an aluminum cup. While familiar-named giants like General Motors get deeper into automatic operations, so do such smaller, lesser-known concerns. Amid talk of mammoth machines with \$2 million price tags, other robots contributing to the trend can be had for as little as \$7,000.

Machine-tool builders do admit that the higher the production volume, the greater are the savings possible through automatic operation. Big manufacturers are still leading this trend. But some of

the machines being made today for small and medium-sized manufacturers are putting an end to ideas that push-buttons go with bigness alone.

All this, of course, means broadened prospects for cost-cutting by these smaller manufacturers. And it enhances the possibility of price cuts on a whole flock of consumer goods.

Right now, Hautau Engineering Co., of Ferndale, Mich., is building for a small Midwest maker of aluminum cups a machine that needs only one part-time operator to do the work of 55 men with present machines. The new device turns aluminum strip into finished cups at the rate of 2,000 an hour. Net savings to the manufacturer: Four cents a cup, or \$640 per eight-hour day. Yet the machine costs only \$60,000.

"There isn't a product made which can't be

'automated'," says C. F. Hautau, chief engineer of the tool-building firm. "As long as a small manufacturer has a substantial volume in any one item, that item probably can be produced much cheaper through automation." That's the term now generally accepted to describe push-button production methods.

Walter P. Hill, Inc., Detroit machine tool builder, has introduced a machine which forms and assembles evaporating coils for air-conditioning equipment at the rate of 150 an hour, with one man at the controls. This compares with a rate of 50 an hour for four workers doing much of the task by hand. New machines were recently delivered to the Rudy Company and to the Kirsch Co., of Sturgis, Mich. The \$7,000-to-\$11,000 cost indicates labor savings may pay for the machines in a few months.

In Fort Atkinson, Wis., a small manufacturer of light fixtures has installed nine robots to machine and assemble rifle grenades for the Army. They do the work of 27 standard machines, turning out 900 grenades an hour, yet they occupy only one-third of the floor space and can be operated by nine button-pushers, against the 27 skilled operators required for the standard machines. The nine new machines cost \$120,000 versus \$300,000 for replacement of the 27 older jobs.

The W. F. and John Barnes Co., of Rockford, recently put an entire line of automatic machinery in the plant of a medium-sized air-conditioning manufacturer. Every hour the machines finish 60 housings for air-conditioning compressors, against only three or four hourly for the former battery of over a dozen standard machines.

Push Button Trend

As an indicator of the way the push-button trend is sweeping ahead in both large and small factories, look how machine tool plants are humming here in this Rock River Valley city. Rockford is a center for production of the complex highly-automatic machine tools that often replace many ordinary machines. While shipments of all machine tools in February (last report) lagged some 10 per cent under a year before, there's been a continuing gain in production of machine tools which perform these more automatic operations.

Many of these "special" tools are custom-built for a particular job. Of course, many builders of standard tools also build specials. Others turn out special fixtures for their standard machines, and some specialized tools use standard machines as components.

There are other signs that sales of the sought-after special tools are outgaining those of the traditional products. The order back-log of the entire machine tool industry, heavily weighted with standard tool builders, equaled about five months' production at the end of February. In contrast, most of the specialized tool builders, here and elsewhere, have backlogs of orders stretching well into 1955.

"We have an 18 months' backlog," says Milton O. Cross, Jr., president of the Cross Co., of Detroit, a major special tool builder. This company reported sales of \$7.5 million in its fiscal year ended last September and expects to hit \$10 million this fiscal year.

In Fond du Lac, Wis., Giddings & Lewis reports its shipments of special machinery in 1953 were twice those of 1952, and the 1954 order backlog for this equipment is twice that of 1953. "This backlog gives us a year of full capacity and extends well into 1955," says R. J. Kraut, president.

Still Expanding

To try to cope with the feverish demand for these automation aids, the specialized producers have expanded their plant capacity explosively, and they're still expanding. Meanwhile, standard tool builders are getting into this end of the business.

"We have added new capacity every year since 1939," says an official of W. F. & John Barnes. The firm has just added 50 per cent to capacity with a 130,000-square-foot plant finished last month. The Cross Co. has in the works a \$4 million expansion plan which will hike its capacity by two and a half times in the next five years.

Big Cincinnati Milling Machine Co., which makes all kinds of tools, doubled its capacity for making special tools and equipment since World War II, then added another 60,000 square feet of space.

Kearney & Trecker Corp., of West Allis, Wis., long a major factor in the standard machine field, last August completed a 200,000-square-foot plant for special tools. Today it has 270 men working in that plant and will hike employment to 400.

Expansions were made last year, too, by Ingersoll, Greenlee and National Automatic Tool Co., of Richmond, Ind., among others. The new plants are planned by Sundstrand and by Barnes Drill Co., another Rockford concern. "In the near future," says Mr. Olson, "Sundstrand plans to build the first unit of a machine tool factory for large specialized machinery."

(Turn to Page 23)

THE NORTHWEST TECHNOCRAT

The Great Migration

The institution of suburbia has created more millions of petite bourgeois than have existed in all the preceding history of man. Their one predominant fear is change. Any change from the prosperity which enabled them to get to suburbia is viewed with hysteria.

IN THE last two decades of our American economy, we have witnessed the unparalleled installation of technological equipment, the continuous decline in numbers of people and total man-hours employed in the actual production of physical wealth, and, simultaneously, a tremendous increase in the total number of workers engaged in non-productive and parasitical occupations. During this period, a phenomenal decline in arduous toil has occurred with a corresponding increase in so-called leisure time for millions of people. The general standard of living has been raised to the highest peak yet attained by any social system. Many new houses, with new water closets, new bathtubs, and new refrigerators, have been recklessly scattered around the landscape wherever subdivisions and real estate could be exploited. In the last forty years, the economic fabric of the United States has been woven into many vivid patterns due to the advent of the automobile and cheap petroleum, combined with nation-wide highway construction.

The trend in agriculture has been one of continued steady increase in the size of the American farm, combined with the decline in total number of farms. The combination of cheap power, tractors, trucks, and modern farm equipment is continuing to reduce the total working agricultural population of the United States, year by year. This trend produces a migration of the agricultural surplus population to the urban centers. Within the urban centers, the continually increasing rents, urban taxation, real estate prices, and congestion have forced a migration from the city centers to the surrounding suburban areas. These suburban areas, dependent upon the size and location of the urban center, are from ten to seventy miles distant from the main hub of the metropolis. True, there was a migration of the population during World War II which was the greatest 'to and from' internal migration in the history of the United States. But the migration to the suburbs continues unabated, furthered in part by our national growth and the twenty to thirty year sales contract in the purchase of homes.

The building boom since the war has been hit-

ting the pace of over a million new homes a year. Where are most of these new homes? They are to be found in the suburbs surrounding our greater and lesser metropolitan centers. The increase in the American standard of living has enabled millions to buy one of the fully gadget-equipped bungalows or ranch houses with nothing much down and twenty to thirty years to pay. Millions have moved into these new homes in the suburbs and millions have gone into debt for a total of some \$65 billion in mortgages so they can live on one of the bright new streets in a new modern home of their own, miles from their previous location. Their homes are fully equipped when purchased; hence their electric stoves, refrigerators, and all other installed equipment are really sold as a package deal along with the houses on ten to fifteen times longer terms than they could get from the appliance dealer down on Main Street.

In the past seventy-five years, the population of American cities was generally credited by all writers and social analysts as being the great reservoirs of liberal and progressive political and social thinking, while the countryside and the small towns and villages were considered to be inhabited by the conservative 'backbone,' consisting of those stalwart individualists who had their feet on the ground. One must realize that the millions, who recently have moved out of the cities, comprise the most energetic sector of that previous large reservoir of liberal and progressive thinking. It was their drive and zest that constituted the major portion of the yeast in the ingredients comprising the social thinking of our metropolitan centers. What are the indices? It has become more and more apparent that as millions of urbanites moved into modern new homes, bright with new colors and new materials, in the clean wide open spaces of our new suburbia, they underwent a political and social metamorphosis. They took on all the coloration of the outward facade of the new suburban community; they ceased to be progressive and they ceased to be liberal (they never had been radical, god forbid!). Any attitudes that they might have had, or

upheld formerly were left behind them in the city centers as something not fit to move with their new furniture into their new homes. They had, in the parlance of that writer of long ago, moved from the wrong side of the tracks over into the clean fresh spaces on the right side of the tracks and they took on all the coloration, not of the new technological equipment in the new home, but of the cultural flavor that is always attendant on the economic splurge of an evolving 'new estate.' The population of the previous small town, village, or agricultural area crowded out by the growth of suburbia may have been composed of conservative Americans, but the population of the new suburbia is a far cry from that healthy conservatism. It has developed a pernicious reactionaryism that is today the greatest malignancy in social and political America.

Other Trends

This migration from the urban centers has also produced certain other trends and reactions. In the development of these new areas, the low income groups of the original residents of small towns, villages, and countrysides find themselves squeezed out by the inflated living standards and the pressures of utility developments of the new suburbia. They are forced to migrate, and they can move only farther out into the country or into the large urban centers to fill to a certain degree the blighted areas caused by the evacuation to suburbia. There is a tendency, therefore, for the cities of United States to become in the near future increasing residential pools of lower income groups driven into city centers. These are changing times. The liberal, the progressive, and even the Democrat of our cities who have emigrated to suburbia have left their former ideas behind them in the city streets. In the suburbs, they become howling Republicans and vicious reactionaries, clamoring for the country and the Continent to be so operated that suburbia can be maintained and expanded to the exclusion of all else.

The institution of suburbia has created more millions of petite bourgeois than have existed in all the preceding history of man. It is new, fresh, clean, equipped with everything, including the latest in transportation and home appliances, without the possession of a single accompanying idea of their collective direction. The suburbanites are banded together by their possessions and the community of purpose of their particular real estate develop-

ment. Their one predominant fear is change. Any change from the prosperity which enabled them to get to suburbia is viewed with hysteria. Most of these homes are still to be paid for to the tune of many billions of dollars. They therefore hope that the present economic performance will have an unbroken run for the next twenty to thirty years. If they have one automobile, they want two; if they are man and wife and four teen-age children, the ideal is six cars. This is wonderful! The breadwinner in these homes rises early and in most cases drives his car to work. In only a few situations on the national scene are there adequate facilities of other forms of transportation sufficient to meet the demand of a suburban commuting public. The whole theory of suburbia in these United States rests on the precarious proposition that the petroleum resources of the nation are inexhaustible, and that the cost of operating automotive transportation will never become prohibitive.

Township, county and state taxes are continually rising under the pressure of demand for more highways and more facilities. The increased cost of materials and increased wages contribute to raising the purchase price of automobiles ever and ever nearer to the blue sky. Once upon a time, the car owner could jog along fairly comfortably behind 23 horsepower under the hood, but now he doesn't want to be seen by his neighbors with anything less than 200 horsepower.

Black Clouds

Suburbians, in order to enjoy that sense of well-being and social security that is a necessary psychological accompaniment to their possessions, must be assured of a continuation of national prosperity for at least the life of their liquidating mortgages. But, there are several black clouds on their horizon. First, the future will see further depletion of our internal petroleum reserves and, as this occurs, the price of gasoline will naturally go up accordingly and we shall have to import more and more to meet the national petroleum consumption demand. Second, the possibility of maintaining a national prosperity in excess of \$367 billion gross national product annually is becoming more and more precarious. Third, in the expansion of capital goods and the development of 'automation' in whole industries, there comes the big black cloud of outright liquidation of obsolescent plants and industries. This brings into being the erection of new industrial centers in more strategic locations too far from

existing suburbia for even a 200 horsepower car. Fourth, our national economy cannot continue to support the grandiose delusion that more and more millions of deserving Americans can become suburbanites. If this trend could continue to its logical conclusion, only the farmers would be left on the soil and the vast multitudes of the low income population would be driven into our cities to take up residence with a few of the very wealthy, along with the minions of municipal administration who would have the problem of preserving law and order.

The cost of operating a nationwide suburbia is expensive. The more it spreads, the most costly it becomes. For, as each new suburb comes into existence, the costs of operation are not decreased—they are increased. Every municipal center of any size learns this sad lesson as it attempts to solve its taxation problems by the process of expansion; namely, of absorbing the incorporated suburbs along its periphery. The more it absorbs, the worse it gets, because the rise of unit costs in the long run offsets any immediate gain in the total taxable income.

Will suburbia continue to expand? Well, what

are the interests involved? Real estate, finance, and banking are involved to the tune of more billions than ever before. The construction industry with its huge employment and its enormous annual consumption of construction materials is another potent factor tending to maintain the continuity of growth. Continued expansion for the short term, yes. But for the longer trend, there are certain factors that may seriously interrupt further expansion. In 1953, our economy hit the peak rate of \$367 billion gross national product. To maintain this rate, it would necessitate a still greater creation of debt annually in our capital goods field. A further increase in our national debt and greater government economic pump priming for all industries and commodities would, of course, increase our technological capacity which, if operated with ordinary business efficiency, would mean a still greater increase in our annual gross national product. Since we are now drowning in abundance in various fields, this would only mean more abundance in more fields. If a 'recession' occurred then, it would be catastrophic.

—Howard Scott, C.H.Q.

A POUND OF THRUST

In the light of our dwindling petroleum resources a look at the fuel consumed by the jet plane might indicate the type of fracas the U. S. could become involved in if outside sources of petroleum were cut off.

WITH THE advent of the jet propelled aircraft a new conception of power was introduced — a pound of thrust. An understanding of this new term will enable one to have a better basis for comparing the reciprocating engine and the turbo-jet engine.

Power is the time rate of doing work. One horsepower is equal to 33,000 foot-pounds of work per minute. If it can be determined at what speed a pound of thrust equals one horsepower, a common basis for comparison will have been reached. One horsepower can also be expressed as 550 foot-pounds per second. By calculation one can also find a relationship between miles per hour and feet per second. For our use here the relationship will be 30 mph equals 44 feet per second. One pound of thrust equals one hp at a speed of $550 \times 44/30$ or 375 mph. This means that when a jet propelled air-

plane is moving at 375 mph each pound of thrust spurted by the jet engine equals one hp developed by the reciprocating engine.

One of the largest piston-type aircraft engines made is the Pratt & Whitney Wasp Major which is capable of developing 3000 hp. The J-57 turbo-jet engine which is used in a number of aircraft including the B-52 bomber is capable of developing 10,000 pounds of thrust. For comparison let us say that the B-52 with its eight turbo-jet engines will fly at the rate of 600 mph. Now it is possible to make a power comparison of turbo-jet engines on the big bomber in terms of the conventional piston-type power plant. Number of Wasp Majors equals $80,000/3,000 \times 600/375$ equals 42.7. Could you imag-

(Turn to Page 27)

DEVELOPING TRENDS

BEAN PICKER

NIAGARA FALLS, N. Y.—A mechanical bean picker that will replace 60 farm workers is being developed by a company here and should be in production within two years.

Burton E. Brewer, sales manager of Chisholm Ryder, manufacturers of canning machine equipment, said the bean harvester can pick a ten-acre field of snap beans as fast and as well as 60 hand pickers. The device is presently being leased to a limited number of growers for experimentation.

The picker is mounted on a four-wheel tractor. It covers two rows and will harvest three-fourths of an acre an hour. Steel fingers on reels snap the beans off the plant and then leaves and beans are conveyed to a cleaning section.

Efficiency in snap bean fields goes up to 90 per cent and in lima bean fields 60 per cent.

—United Press

—Who wants to pick beans anyway?

BRITAIN ADVISED NOT TO BUY U. S. SURPLUS BUTTER

LONDON—The independent Daily Express advised the British government to shy off from buying any of America's surplus butter.

The Express asserted in an editorial that the stored butter "is so stale that it is in danger of going bad" and added:

"Besides, Britain has butter enough without taking on stuff that soon will be fit only for axle grease."

Britain recently derationed butter for the first time since early in the Second World War.

—Associated Press

BRITON BUILDS CHILDREN'S SHOE TO LAST—AND LAST

LONDON—A shoe guaranteed to outlast the wearer has British children baffled. A West of England manufacturer issued a pair free to each of a group of children with instructions to report back in half a year.

They have just checked in—every last shoe intact. The children reported they had climbed and crawled, slid and scampered, kicked and scuffed and scraped, but the shoes would not wear out.

The uppers are of leather, but the soles—attached in such a way it is virtually impossible to part them from the uppers—are solid rubber.

The manufacturers say the new shoes cost less to make than ordinary footwear, because fewer processes are required.

—Associated Press

—It is apparent that goods can be made to wear instead of wear out but the fact still remains that it is 'good business' to have a fast turnover in shoddy merchandise as long as the Price System lasts. What would happen if we made things that wouldn't wear out? High inventories? We've got them already, brother, even with all our ingenuity at manufacturing shoddy goods.

STEEL PRODUCTION TAKES A 28 PER CENT DROP

The domestic steel industry turned out 7,290,000 tons of ingots and steel for castings last month, the American Iron and Steel Institute estimated recently.

This represented an increase of more than 206,000 tons from the shorter month of February—but a decline of more than 28 per cent from output in March last year.

—New York Times

NEW BATTERY POWERED BY THE SUN IS INVENTED

MURRAY HILLS, N. J.—Bell Telephone Laboratories scientists demonstrated a small solar battery made from an element of sand, that puts within reach their goal of rendering sunlight directly into electricity on an economic scale.

The battery is not yet ready for use in huge sun electric power plants because of cost and engineering problems, but the theoretical and experimental work has been done.

One of the sun batteries produced enough electricity to run a toy ferris wheel; another powered a telephone conversation; two more electrified small radio transmitters that sent out voice and music signals. The batteries produced about 1,000,000 times more power than the recently announced atomic battery.

The inventors claim the solar battery can convert to electricity about 6 per cent of the energy of the sunlight falling on it. This means that about one square yard of battery would produce enough electricity to light a fifty-watt light bulb. One-eighth of an acre would be needed to power a small home.

No actual estimates of cost were given, but the scientists explained that the individual units of the battery are no more complicated to manufacture than razor blades, which cost about a half cent to make in mass production. On that basis, a square yard of battery would cost about \$5.

The inventors of the battery are G. L. Pearson, physicist; C. S. Fuller, chemist, and D. M. Chapin, an experimental engineer. They say they can increase the efficiency of the battery to 10 per cent with a few changes. The theoretical limit is 22 per cent efficiency.

—New York Herald Tribune

HALSEY RETURNS FROM DOWN UNDER

SAN DIEGO, Calif.—Retired Fleet Adm. William F. Halsey returned to the United States recently after a five-week tour of Australia and New Zealand.

Halsey said he would not comment on anything international or political, but was high in his praise of the people he met Down Under. Halsey said the Australians look upon the United States as a friend, while they look upon England as the mother country. "You lean on your friends, not your mother," he said.

Halsey was asked if he meant that Australia would expect assistance from the United States in event of trouble.

"Who the hell doesn't?" Halsey replied.

THE NORTHWEST TECHNOCRAT

U. S. URGED TO ORDER NEW ARMY UNIFORMS

A plea to President Eisenhower urged an immediate start on procurement of the new gray-green Army uniform as a means of easing unemployment among textile workers.

The plea was made by Emil Rieve, president of the Textile Workers Union, C.I.O. He asserted that employment in the woolen and worsted industry had shrunk from 167,000 to a level of less than 70,000 persons, and many of these were working only part time.

Mr. Rieve asserted that thousands of workers had been without jobs so long that they had exhausted both their personal resources and their right to state unemployment insurance benefits.

"Inasmuch as the uniforms are to be bought eventually, the best time is now," the union leader declared. "By starting procurement of the new uniforms at once, the Government can do much to alleviate distress."

—New York Times

—It begins to look like we will have to re-outfit our Armed Forces every year in order to keep people working. But then, again, automatic textile factories do not need many workers to turn out those Army outfits. We'll have to think of a better method than that of using our abundance.

COMPARISON

On every side today, you hear the experts comparing our current cycle to the recession of 1948-49.

Well, here's the box score on 1948-49 versus 1953-54 to date.

From the peak of 1947-48 to the low of 1949-50, total industrial production dropped 10 per cent in nine months.

From the peak of 1953 to January, 1954, industrial production dropped 9 per cent in eight months. (It's over 10 per cent by now.)

In 1948-49, output of soft goods fell 6 per cent in 10 months.

Soft goods output so far is down 9 per cent in eight months.

Then, output of hard goods fell 17 per cent in 12 months.

Hard goods output is now down 11 per cent in five months.

Then total man-hours worked in manufacturing slumped 19 per cent in 19 months.

This key index is down 12 per cent in 10 months.

Then, total new construction fell 4 per cent in seven months.

Construction isn't down at all so far.

Then, total business inventories fell 7 per cent in 10 months.

Inventories are down 2 per cent in 4 months this time.

Then, total retail sales fell 4 per cent in 7 months—but sales of hard goods (cars, appliances, etc.) didn't decline a bit.

Retail sales overall are off 5 per cent in 11 months and sales of hard goods this time are down 13 per cent in 11 months.

Then, total personal income dropped 5 per cent in 12 months.

Personal income is down 1 per cent in 6 months.

Then, total non-farm jobs dipped 5 per cent in 11 months.

Total non-farm jobs are off 2 per cent in 6 months.

—Newark Star-Ledger, March, 1954

NEW WELDING METHODS

BUFFALO—The price of your future car, refrigerator or television set may be cut substantially if new techniques in welding are adopted by large industry.

Equipment displayed by the American Welding Society here follows the trend in industry toward automatic operation. Engineers point out the resultant speed-up in production and cost reductions should be reflected in lower prices for the cash customers.

More than 3,000 separate items are on exhibition by 98 companies in the largest welding show ever assembled under one roof. Many of the items are claimed to be "revolutionary," in that they join metals never before united by welding.

One new piece which is expected to cut TV production costs stud-welds picture tubes to support the assembly at the viewing end of the tubes. Another continuously-operated automatic machine makes 19 separate movements without human control and then starts the cycle over again.

A huge positioner runs along a railroad track, turning 20-foot tanks into position so a welder can burn a seam without moving.

Three resistance welding machines manned by unskilled workers can spot weld 4000 car bumper brackets a day. The manufacturer claims that an arc welding department, to maintain the same production, would require four times the floor space, 12 arc welding machines and 12 experienced arc welding men.

A similar resistance welding machine can assemble 42 parts of a simulated wire wheel for an automobile simply by having an unskilled operator set the controls, feed the parts and press a foot pedal.

Much of the guesswork in welding is eliminated by new electronic timers and X-ray machines. An X-ray device, called the little "pig," scoots through 1600 feet of pipe, inspecting it with pictures for welding defects before the pipe is buried in the ground.

—United Press

THE IMPACT OF TECHNOLOGY HAS REVOLUTIONIZED THE LIVES OF MEN

UNITED NATIONS, N. Y.—Unemployment in five countries has been running higher than just before the Second World War, the United Nations' latest figures reported.

The countries are Chile, Denmark, Finland, Japan—where it has been going down since early spring, 1953—and Italy—where it has been fluctuating.

In 15 of 30 listed countries and territories, more people were out of work in the latest reported month than in the corresponding month a year earlier. The month generally was December or January.

The United States was one of these countries. The others were Belgium, Canada, Chile, Finland, France, India, Israel, Italy, New Zealand, Norway, Spain, Hawaii, Puerto Rico and the Saar.

Countries with fewer people out of work were Australia, Austria, Burma, Ceylon, Denmark, West Germany, Ireland, Japan, The Netherlands, Pakistan, Sweden, Switzerland, South Africa, the United Kingdom and Southern Rhodesia.

On the yearly average, 1953 unemployment was about three and a half times as high in 1952.

—Associated Press

—What has become of the phrase—machines make jobs?

The Challenge of Change

Man is now living in a vast machine which he constructed. The danger is that his brain enabled him to build this machine sooner than it gave him understanding of its operation.

THE IDEA that the only permanent thing is change is well borne out by only a cursory examination into the nature of anything. The chair you sit in is going through a process as is the organism which is you. Everything in nature is going through one or more processes continually. Where all this change leads to is the proper province of science, because science is the **method of determining the most probable**. Science is the only method of predicting the future that has consistently given results. Actually the only physical progress man has made at all has been by using the method of science.

One must keep firmly in mind that neither the intellectual sports of philosophy, the subjective appreciations of esthetics, nor the satisfactions of accepting the dogmas of religion are methods of determining the most probable. We must also accept the fact that it is possible to compartment our minds and use a different set of referents for different situations—different **frames of reference**. For instance, confronted with a flat tire you do not fix that tire by prayer, by argument as to whether it is beautiful nor by a wordy theory as to whether the tire is real or not. No—if the tire is repaired, you or someone must treat that tire in accordance with laws and principles determined by science so that it again contains sufficient air (determined by science) to perform a specific function (determined once again by science).

Frame of Reference

Now let us use the frame of reference of science to take a look at the above mentioned change. We insist on this frame of reference because we want to come to some agreement with you as to a course of action and we know that we never all agree when any other frame than science is used—how many religions, philosophies, and esthetic biases are there?

We can deduce from observations of fossil remains and their locations and from observations of the changes in different generations of animals and plants in controlled experiments that man has had

a long, long history. (This need not upset any religious concept. The Catholic church late in the last century changed its belief system slightly to accept the idea that the world is round, but Catholics had suffered no inconvenience in their traveling around the world prior to that time.)

Now, fossil remains and experiments tell us that most probably man was not always as he is at present. The apes and monkeys of today are not the same either as they were way back then. When the line of man started, there wasn't much difference between the animal which turned out to be man and the animal which developed into what we now call ape or monkey. The divergence resulted from what are called **mutations**, many of them. A mutant is an organism which differs just a little from its parents and if this mutant is more suited to the environment than its brothers, it will probably grow and flourish while its brothers have less chance of living to breed their kind. This mutation process might at each step be very slow. An instance of change through mutations and natural selection might be found in a swampy and warm area which changes over thousands of years to an area more dry and cold. The inhabitants of this area, in order to survive, would have to change their breathing and perspiration systems—not voluntarily but by the process of mutation and natural selection, nature favoring those mutants which were most efficient, and ruthlessly discarding those types found less functional.

We have been explaining what has come to be known as Darwin's theory. A theory is a scientifically acceptable principle offered to explain some phenomenon and a theory is valid only when it satisfactorily incorporates all the known relevant facts. Thus Lamarck's theory of the transmission of acquired characteristics was discarded in favor of Darwin's theory.

A Specialty

Not long ago, geologically speaking, man evolved a specialty—his brain. This human brain is a veritable mushroom kind of thing. It seems that it

grew more than it was needed at the time. There are stories about specialties evolved in other animals which hindered and finally killed the species. Events will soon divulge whether man's brain is another specialty which means the end of his species. Such an eventuality is definitely a possibility. We can understand that when we learn about our present waste of natural resources, our rates of population growth, and nuclear weapons in the control of a type of human which possibly is an example of regressive evolution or devolution.

Man's evolutionary specialty, this mushroom growth of correlating neurons at the upper end of his spine—his brain—is a wondrous mechanism. Neurologists, physicists, and psychologists (scientific variety) are lately learning much about the workings of this electro-chemical device with all its circuits (and short circuits). However, there is no way of knowing yet whether this brain has allowed man to get himself into a position which his brain cannot get him out of. The test is being made now.

A Vast Machine

Man, by using the method of science, has surrounded himself with devices which he can control and which use energy at a high rate. He is now living in a vast machine which he constructed. The danger is that his brain enabled him to build this machine sooner than it gave him understanding of its operation, which could become a fatal fault!

The only frame of reference that ever has produced for man any dependable control over his environment has been science. It should be clear that the only way to extricate ourselves from our present social dilemma is to apply science to the solution of that problem. The present political situation is as ridiculous as would be the election of a pilot from among the passengers of an airplane—or to use a list of 'don'ts' as a substitute for the engineer's handbook in the building of a bridge.

This Brain of Man

It's tricky, this brain of man. And while its abilities and intricacies are amazing, also its tendency to become confused is tremendous. There are circuits built into man which control every gland and muscle. There is a trick that man can pull on himself which causes him all sorts of trouble; this is called conditioning. It is the way animals learn that a thing or event has meaning. For instance, man can be as easily trained to regard eating to

be as repulsive and shameful an act as Americans regard sex to be, while associating no more shame and guilt with sex than you at present place on eating. He can be conditioned so that he feels just terrible if a particular word is uttered or with that same word uttered he can be made to feel ecstatic. Yes, man can be controlled! But the present social controls are those which he brought with him out of his dark and savage past; witness the gargoyles on university buildings—if they weren't important to us they wouldn't be there, would they?

Another Form of Price System

Many of our social customs and institutions are just as ugly and useless as those gargoyles. We've given up the practice of blood-letting as a cure for illness and have almost quit witch burning, but we in America are now seeking the favor of every fascist government in the world. Fascism, and for that matter Communism, is a social control which is merely another form of the Price System. And here in America, as Technocracy Inc. has predicted, the Price System is almost finished—not because man doesn't like it (he's been trained to like the Price System) but because machines have replaced man-hours worked, causing purchasing power to be insufficient to buy up the production and keep the system going.

The Record Is There

There is in America a group of humans who have through science been able to predict the course of events in America. The record is there for you to see. They have formed an education and research organization—Technocracy Inc. which is designed to train leadership for a transition from this unstable economy to one wherein man will be able to regulate his society without the mistakes he now makes. This transition is beginning and it will be touch and go. It is a most dangerous situation man finds himself in now. Across the chasm of transition man is going to be forced to go; if he makes it across he will land in a safe and secure new kind of culture—but can he make it?

The scientists and engineers of Technocracy Inc. have concluded that the odds are in favor of man making the grade, but they are depending on what might be called those superior mutants in this society who are able to adapt themselves to a new environment. If you are that kind of organism we'll see you soon working and learning in Technocracy.

—John L. Berge, 12247-3

Preventive Medicine

It should be apparent that medicine today cannot reach its full stature when the reason many medical students decide to be doctors is to assure themselves of a handsome income once they graduate.

IF YOU are interested in preventive medicine and have not become aware of Technocracy, then you have in store for you a most pleasant surprise. Preventive medicine at present is an idea which must remain only an idea. Any attempt to accomplish any considerable gain in this field must meet frustration. And yet Technocracy Inc. states that preventive medicine will quite soon be almost the only kind of medicine practiced in America. Before we continue further let us digress for a moment to tell you how we know this.

Technocracy uses the method of science in its analysis; but there are many misconceptions about this thing called science. The current stereotype of the scientist is an image of a middle-aged man of serious mien in a laboratory, equipped with test tubes, microscope and van dyke beard. (This fellow is the one we see so much in the advertising of everything from patent medicines to research in heart disease.) His problem is 'bugs.' This image is incorrect. The scope of a scientific inquiry might be much larger than that stereotyped laboratory; scientists might investigate the universe—as indeed they are. Science is the method of determining the most probable. One schooled in the method of science—a scientist, might often be unable to offer a prediction of the most probable in the particular problem he is considering—he might not have enough facts!

The scientists and engineers who functioned in the continent-wide research program for nearly fifteen years prior to the formation of Technocracy Inc. were able to uncover more than sufficient facts to justify their prediction that the Price System in America is doomed to extinction by the widening gap between purchasing power and production. You are invited to check those relevant facts and to refute if you can (no one has yet) the prediction.

You ask 'what then'? The probability is that, granted sufficient members and activity in Technocracy Inc., leadership will be trained which will spearhead social movement toward a definite positive goal—an attainable and worthwhile goal, a

dynamic functional control of America's social mechanism. This is preventive medicine on the grandest scale! We shall examine a few aspects of this new kind of preventive medicine and also take a brief look at the abortive preventive medicine of today.

It should be apparent that medicine today cannot reach its full stature when the reason most medical students decide to be doctors in the first place is to assure themselves of a handsome income once they graduate. There are numerous statements made lately by members of the profession deploring the extent of unneeded hysterectomies, appendectomies, tonsillectomies, exploratory operations . . . ad infinitum. Those doctors who do attempt to practice the oath of Hippocrates and are revolted by the suffering from unnecessary operations that is today quite common, would do well to remember that the motive for such malpractice is ever present—**money!**

If a doctor devises a technique which could be learned easily by others, don't you agree that the temptation to retain that information and thus enhance his own income is present? And if a doctor tries to advance an idea which would hurt some monied interest (such as patent medicine) he is probably in for trouble.

Nutrition has gained some notice lately but how can one expect to be given correct information on this important subject when such powerful interests are trying to keep you buying their product? Most of the interest in such a subject as nutrition can be quelled by a few articles in a few leading magazines. Did you see the one entitled 'Beware the Food Faddists'? The activity against interest in nutrition by the vested interests who use the mass media of communication has some interesting side-lights. Again we see the formation of a new minority group—the Nutritionists—who, fired by the zeal of the martyr, go about proclaiming that America's 'Big Problem' is nutrition! . . . Another group who earn the title 'crackpot' by only a partial application of the method of science!

Advertising as practiced today is possibly one

of the biggest external sources of mental illness. Advertising has progressed from the mere notice to the public of a new product or business to the ultimate in propaganda, with all the stinking connotations attached to that word. Advertising now includes misinforming the public on social problems. We probably won't be able to gauge the extent of illness caused by all this inconsistent information until we see what consistent scientific education and reporting will do.

Nothing decisive and positive can solve most of our problems except discarding the Price System and implementing science to solve the overall problem. The roots of most social problems are in the Price System itself, and as with attacking a single disease, the only true preventive is to remove the root cause of the malfunction. It is fortunate for Americans that the Price System is removing itself and that the problem of transition is all we have to concern ourselves with. But there, a stark and inescapable conclusion faces any intelligent citizen—namely, that support of Technocracy is the only preventive medicine for detouring the chaos which means the end of this civilization as we now know it.

Let us look at preventive medicine in the New America of abundance and security for all. We see at once that the whole system is designed to function for the individual and is not as at present designed to provide a prize ring wherein savages try to outdo one another in predation.

Functional Sequences

The functionals of today are doing, generally speaking, what they will be doing in a Technate. The government will be the industries and services arranged into functional sequences. There will be a functional sequence for communications, one for education, one for transportation, etc. The functional sequence of medicine will be one of the service sequences. The heads of both industrial and service sequences will sit on a continental control board—which would correspond in size roughly to our present Senate. That's not complicated, is it? The government will no longer be a group of law makers, but instead will be formed of those who are actually running the country right now! The government will have the same responsibility that those same functionals have at present . . . rendering you goods and services, but they will not be impeded by our un-American, European leftover—the Price System.

The head of the medical sequence who sits on

the Continental Control Board will be there because of his ability . . . in medicine! We won't vote for him—we will have a choice of personnel only in our own department where we know the people and the job to do. If the person we pick, at any time becomes less efficient than someone else, we make the change for the better. The same will hold for medicine. It should be quite easy to see that when the medical sequence is held responsible for the health of the nation and given everything it needs to do the job, that vast changes for the better will be immediately apparent. It is probable that hospitals will have to be more centralized so that the best doctors can be used as diagnosticians and so that there can be enough specialists in one group to take care of anything. No more will we hear of Dr. Willingcutter hiding the evidence of his malpractice in that repository of doctors' secrets—the garbage pail!

Each citizen will be required to have a complete physical examination at intervals and his medical records will be kept from birth to death in one folder. You will not be permitted to be sick!

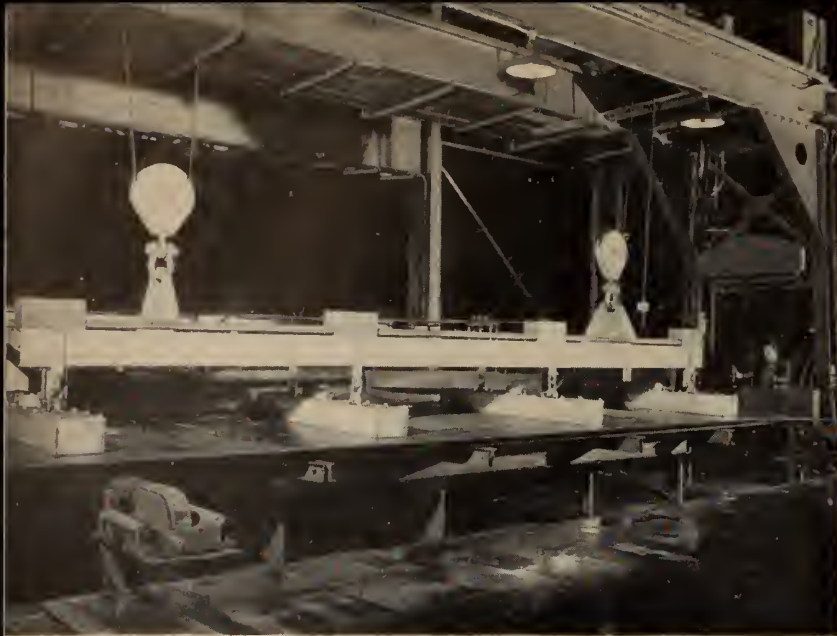
The head of medicine on the Continental Control Board will have information on the happenings in agriculture through reports from the head of that sequence. The head of medicine will also be interested in the design of transportation for reasons of health and the prevention of accident, he will be interested in the design and operation of housing, industrial plants, education and everything else that affects health. The director of the medical sequence will be personally responsible for the nation's health and he will direct through the most efficient type of organization yet devised.

Research Sequence

The research sequence is a sort of freelance sequence having its members installed throughout the system. Thus a new device developed in one sequence would be brought to the attention of those who would use it. We have only scratched the surface of research, so it is difficult to imagine the results of an unrestricted and well directed research program.

The words 'preventive medicine' have tremendous significance for a Technocrat. We hope we have excited your interest to the extent that you will investigate Technocracy further, because you, by becoming a Technocrat, will be practicing 'preventive medicine.'

—12247-3



STEEL PLATE begins its journey for fabrication into large-diameter pipe at this point in the South San Francisco Plant of Consolidated Western Steel Division, United States Steel Corporation. A man is operating a magnetic crane which is controlled electrically to pick up two sections of plate and release them, one at a time, on flat conveyors for transfer to the shear line.



STEEL WORKING ON STEEL is a common sight in pipe-fabricating operations. Via a push button panel a steel plate 32 feet in length is formed into a cylinder by being rolled in this plate roll. Automatic, hydraulic materials handling equipment speeds the production line operations in transforming steel plate into welded and expanded pipe for high-pressure transmission of natural gas.

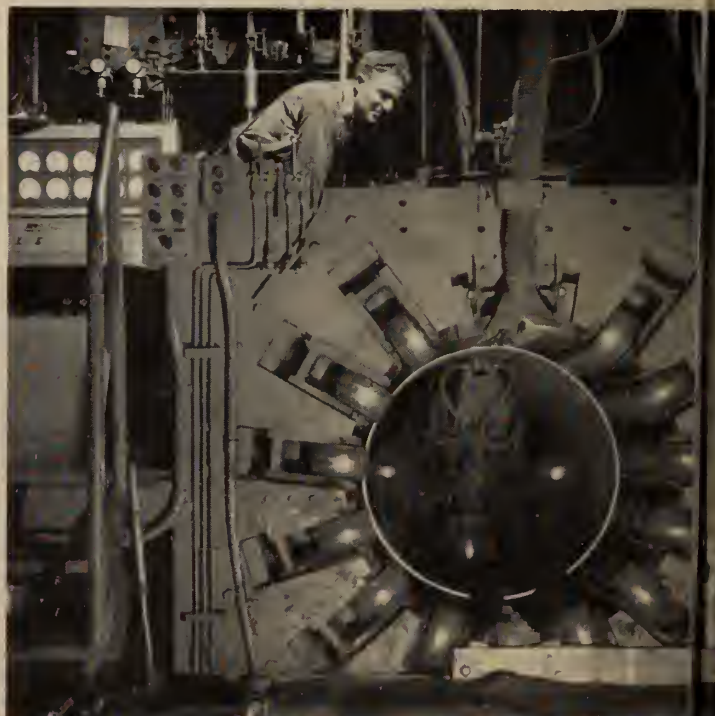
Fabrication of Pipe

For the Super-Inch

PROPER BEVEL FOR WELDING is important in the fabrication of large-diameter steel pipe. An operator tends a traverse carriage planer as it machines the side of the plate and produces the proper bevel for welding in subsequent operations. The other side edge of the plate is similarly planed at the next line station.



WELDING IS ALL-IMPORTANT in the fabrication of large-diameter steel pipe. An operator is shown in the control box of an outside welding machine as the front section of a 32-foot long pipe begins emerging. Steel plate formed into a cylinder is fed continuously into the longitudinal seam welder, in which the abutting edges are properly aligned, firmly pressed together, and fed at a controlled speed under welding electrodes. The weld is made by the submerged arc process. Equipment seen inside the pipe is a water-cooled back-up shoe that is supported tightly against the interior seam. This chill bar permits outside welding about halfway down the beveled edges. The entire welding action takes place beneath the flux without visible evidence such as flash or sparks. Weld metal has a chemical composition very similar to that of the plate material.





INSIDE WELDING OF PIPE destined to carry natural gas under high pressures assures a firm bonding of the two edges of steel plate after it has been formed into a cylinder. After the seam has been welded about half-way through from the exterior, the pipe moves to the inside welding machines. Here the operator is adjusting the cantilever arm carrying a welding head, which allows the pipe seam to pass under the point of welding. The pipe moves by means of a movable car. As in the case of outside welding, the submerged arc process is used for the inside welding.

A SURGING WATERFALL follows removal of a 32-foot length of steel pipe from a hydraulic expanding machine. The water is combined with hydraulic pressure to expand the pipe, permitting use of thinner wall pipe for a given internal pressure, with corresponding saving in weight. The water is emitted in preparation for the machine's acceptance of another pipe section. The water, which contains a soluble oil, is reclaimed and re-used in the operation.



A TUNNEL OF STEEL is traversed by means of a dolly as an inspector examines the interior welded seam in a 32-foot section of 34-inch diameter pipe. The pipe is subjected to rigid examination and tests before it is shipped to field operations where it will be installed for high-pressure transmission of natural gas.

SUPER-INCH PIPE

THERE might be several ways of getting natural gas from Texas to California, but by far the most efficient method of transporting it is by pipe line. If huge quantities of gas are needed and are available, a large pipe line will do the job most efficiently. As a result of satisfying these conditions, the Super-Inch pipe line is being constructed.

The process of producing the pipe for the gas line is very exacting and commands initiative and foresight to design and build the pipe. From the plate stock to the finished pipe there is no back-tracking during processing. The half-inch plate stock, 104 inches wide and 32½ feet long, is handled entirely by machinery. The long edges of the sheet stock are beveled on both sides of the sheet, these edges are crimped to assure mating once the rolling of the sheet is finished. Two welding heads in tandem are used to weld the outside seam—one alternating current and one direct current. The granular flux when heated forms a shielding medium around the arc, thus protecting the welded seam from oxidation by the atmosphere. The spent flux is broken up and carried away by vacuum. The pipe is then rotated 180 degrees so that the seam is on the lower side of the tube. A short length of the seam on each end is welded by an automatic squirt-type welder. Then the welds are ground smooth



NATURAL GAS will flow through the pipe at tremendous pressures when a 506-mile section connects with a 1600-mile pipe system to the fields of Texas and New Mexico. The 34-inch welded and expanded steel pipe is the largest diameter pipe made for high-pressure transmission of natural gas. The pipe is being fabricated in volume from steel plate.

and visually inspected. Dy-Chek inspection for minute surface flaws or cracks follows. This inspection consists of painting a red dye of high capillarity on the welded surface, letting it dry, wiping it off and sprinkling it with white developing powder. The dye is drawn out of the irregularities by the powder, exposing them immediately.

After the weld successfully passes the inspection test, the pipe is expanded to increase its yield strength from 45,000 psi to 58,000 psi. Three inches on each end is expanded to a 34-inch diameter. This step is done preparatory to expanding the full length of the pipe since it is not possible to hold the ends water-tight and expand them at the same time. Water-tight heads and enveloping hinged dies are fitted onto the pipe prior to expanding the pipe with water containing a soluble oil at 1700 to 2100 pounds per square inch pressure. After the pipe is expanded it is tested hydrostatically under slightly less pressure. The finished pipe, after being hammer tested, is straight and round and its length has shrunk $2\frac{1}{2}$ inches. In order to facilitate assem-

bly in the field the ends are squared and beveled and two 32-foot sections of pipe are welded together in the shop. A special submerged-arc welding machine aligns the single lengths, holding them the correct distance apart at the joint so that a strong weld results.

By the use of automatic and efficient machinery the processing time is cut to a minimum.* Producing efficiently usually demands the use of machinery which is automatically controlled. When this is done, the number of men employed producing articles, whether they be heavy machinery, super-inch pipe or children's toys, is decreased. When enough people are deprived of their weekly wages, the economic trend is to slow down the productive pace still further. The solution is at hand—Technocracy.

—George Kellogg, 12247-3

* The permanence of such an installation as this pipe line is of social significance to construction workers because maintenance and replacement man-hours are cut to a minimum.

Photos Courtesy of United States Steel Corporation

Have You Observed?

... **Bread and circuses** heralded the decline and fall of the Old Roman Empire. The process took about four hundred years. Today in the United States we have bread and circuses to avoid direction of public attention to basic problems. Recently, many people have been sitting up until two a.m. watching McCarthy vs. Army. Some call it entertainment but it is really surface evidence of the decline of a great nation. The present rate of our decline to chaos, if not arrested, may not allow us from this point on one per cent of the time it took Rome to fall.

... **After** it had begun to become evident that Roman Catholic Joseph R. McCarthy's investigation tactics were arousing the ire of some Protestants against Catholicism, Church representatives joined in the attack to allay the growing fear of Catholicism. This shows again, as in Church history, that the Church will act swiftly to sacrifice its own when it is expedient.

... **The behavior** of McCarthy is so obnoxious that even Eisenhower must be wishing that he would go away.

... **North America** is infected with a virulent fascism by certain groups in politics, business and ecclesiasticism who detest the prospect of social change, and who will fight hysterically to preserve the status quo, the differential advantage of income under the Price System. Technocracy stated many years ago that the real issue is abundance and how to distribute it. Crammed warehouses and growing unemployment is ample proof that Technocracy has been correct from the beginning.

... **It becomes impossible** to preserve price tags on what is produced when new machinery and technology constantly increase production, and at the same time eliminates man-hours. How the devil can the public purchase enough to keep industry operating? That's the question—and the problem before the citizens of North America.

... **Dulles** would like to engineer another fiasco like Korea by getting the U. S. involved in the Indo-

Chinese dispute with French colonialism. There is some evidence that such U. S. action would be hard to sell to the American public, generally. If we aim to increase further the hatred of the Asian, invading Indo-China with American forces would be appropriate action. But that kind of a war wouldn't be big enough to help business much. However, any kind of a war is always apt to lead to something bigger. You know, there are 500 million Chinese we could try to kill off. That ought to be a big enough job for any nation.

... **Technocracy** watches events unfold, knowing that the time is close when we will be driven to accept the obvious and employ a new method of social operation.

—Harry Briggs, 12247-1

Junior Robots

(Continued from Page 10)

For both large and not-so-large manufacturers, the labor savings resulting from automation sometimes border on the sensational.

Among the big fellows is Ford's aircraft engine plant in Chicago. There rough aluminum forgings are being automatically turned into precision-machined aircraft engine cylinders at the rate of 40 an hour by robot-like "transfer machines." These machines, supplied by Greenlee Bros., and by Foote-Burt Co., of Cleveland, perform 124 drilling, milling, boring, reaming, tapping, spot facing, chamfering and counter-sinking operations to an accuracy of one ten-thousandth of an inch.

"One milling operation, a flat cut across the cylinder head, is done before the transfer machines take over," explains W. R. Catey, manager of manufacturing engineering. "This one cut requires three machines, three operators and their helpers, plus other men to handle the cylinder heads. Yet only

(Turn to Page 27)



Civic Auditorium, Everett, Washington

HOWARD SCOTT Pacific Coast Tour

TWENTY YEARS have gone by since Howard Scott, Director-in-Chief of Technocracy, made his first tour of the Pacific Northwest. Section 1 of Regional Division 12247 was formed in Everett that year and many other sections were organized in the years to follow. Many tours by Howard Scott and other authorized speakers were conducted and Technocracy grew. The busy public in the war years would forget to take notice that Technocracy was still around and so every year or so Technocracy would be 'discovered' again. But in spite of the prosperous years and busy times the Technocrats went steadily about the business of painting Gray Cars, conducting Public Lectures and holding Study Classes.

On the evening of April 16, 1954, Howard Scott again spoke to a very interested audience on the subject 'Peace or Prosperity?' at the Eagles Auditorium in Seattle, Washington. Of the hundreds that

heard him recount the increasing evidence of the impossibility of distributing abundance within the framework of a Price System, a large number expressed interest by signing expression of interest cards, and buying literature. The usual question period followed with the 'Chief' very thoroughly answering the questions which the audience had asked.

An Area Officers Conference was held the next day at Section 3, R.D. 12247 and at 6:00 the same evening a banquet was attended by all members, many from Canada and other points in the Pacific Northwest. The very full day was closed by a dance for members and their friends after the banquet.

Sunday, April 18, an Area Membership meeting was held. Whether hearing him for the first time or the hundredth time, each member was staggered by the 'Chief's' fantastically-great knowledge of the physical world and his amazingly retentive mem-

ory which permits him to talk authoritatively without repetition on widely diversified subjects.

Tuesday, April 20, a dinner lecture meeting was attended by a large audience in Bellingham, Washington, twenty miles south of the Canadian border. Keen interest was indicated by the large percentage of non-members in attendance.

The stage for the final Pacific Northwest function in the 'Chief's' Pacific Coast Tour was set in Everett, thirty miles north of Seattle. Friday night, April 23, in the Civic Auditorium the 'Chief' spoke on the subject 'Time for Decision.' Due to the advance publicity which the Everett Section had put out, there is doubt if anyone in the city was unaware of the meeting. Literature sales and expression of interest cards signed were high. An indication of the public's interest in Technocracy was apparent as it was in all of the meetings held thus

far on this tour; Howard Scott's first major tour in this area since 1947. A membership meeting was held the next night in the Everett Section Headquarters where the members were again treated to more information pointing out the disintegration of the Price System.

Thus, ending a successful and informative phase of his Pacific Coast Tour, the Director-in-Chief left for San Francisco and Los Angeles, California for further meetings.

Twenty years is a short span in which to build a great social movement, but the trends are with Technocracy. Many people are becoming aware of the increasing instability of the present economy. They are looking for something to explain why it is so. Remember, 'Mightier than armies is an idea whose time has come.' That time is upon us.

—Ruth M. Berge, 12247-3



The 'Chief' answers questions, Everett, Washington

Junior Robots

(Continued from Page 23)

10 men are required for the 124 following operations done by transfer machines."

And here's a standout sample of the benefits being enjoyed by smaller manufacturers. A new \$78,000 machine delivered by Hautau to a medium-sized Midwest maker of electronic equipment turns out solenoids (magnetic parts for electrical apparatus) at the same rate previously maintained by 80 workers. These parts were previously made by punching out pieces on punch presses, cutting them to size, riveting sections together, then grinding edges. Now the machine performs all these operations automatically, with a single push-button operator in charge.

—Reprint from Boilermaker-Blacksmith Journal
May 1954

CONTENTS

No. 176 (Vol. XVIII) July, 1954

	Page
A Problem Clearly Stated	2
Labor's Past and Future	3
Ima Moron	7
Junior Robots	9
The Great Migration	11
A Pound of Thrust	13
Developing Trends	14
The Challenge of Change	16
Preventive Medicine	18
Super-Inch Pipe	21
Have You Observed?	23
Howard Scott Pacific Coast Tour	24

Editorial Board.....George Kellogg,
Harry Briggs, Ruth Berge
Business Manager.....Rina Corcoran
Circulation Manager.....Lucy L. Barnes

Printed in U.S.A. by volunteer and union
labor on Technocracy's own press.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or association either in America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section. Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses, or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every province in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the nearest Technocracy unit.

WHO?

Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—so long as you are a patriotic American—you are welcome in Technocracy.

A Pound of Thrust

(Continued from Page 13)

ine 42 large piston-type engines propelling one air-plane? This example should give one a better conception of the power developed by the turbo-jet engines.

In the light of our dwindling petroleum resources a look at the fuel consumed by one of these 'hungry' engines might indicate the type of fracas the U. S. could become involved in if outside sources of petroleum were cut off. The greater the power of engine the greater the amount of energy which has been converted to do work, but the turbo-jet engine does not merely extend the curve lineally. The specific fuel consumption of a turbo-jet engine is about 1.00 #fuel/#thrust/hr. while the figure for piston-type engines is about 0.50 #/HP/hr. The Wasp Major operating at rated horsepower consumes 1500#fuel/hr. One U. S. gallon of gasoline weighs 6.0 pounds. A J-57 turbo-jet engine operating at maximum thrust consumes fuel at the rate of 10,000 #/hr.

If a World War II type fighter equipped with one Wasp Major engine travels for one hour at the rate of 400 mph, the plane will have traveled 400 miles while the engine was consuming 1500 pounds of fuel. While the turbo-jet fighter is heavier than its World War II counterpart, it can travel much faster and carries much heavier firepower. A jet fighter equipped with a J-57 turbo-jet engine traveling at 700 mph for 400 miles consumes 5700 pounds of fuel. In both of the 'above examples it is assumed that each engine is operating at full rated power for the entire 400 miles. The turbo-jet fighter's consumption of fuel is 3.8 times that of the piston-engined fighter. While the jet engine continues to develop its rated thrust at high altitude, the horsepower developed by the piston engine falls off rapidly at high altitude. However, at slower speeds the jet engine is really uneconomical.

During World War II private industry manufactured for the United States Government slightly over 100,000 fighter planes and almost as many bombers as well as all the other war materiel to keep the economy at a prosperous level and to consume any surpluses that might have been on hand so that the things you buy might be kept scarce and, therefore, have value. The petroleum necessary to keep 45 million cars on the road and

still supply the Air Force and other armed services is enormous. Today, the United States is importing around one million barrels of oil per day to keep our 'peacetime' economy operating. Now in the light of the relative petroleum consumptions of piston-engined planes versus the jet-engined planes, would it not be wise to adjust our foreign policy and the method of conducting a war after we get into one so that these were in agreement with the extent of the natural resources in the area instead of voting in politicians to 'dream up' ideas for prolonging the Price System? The short sighted aims of these men might very well put us in a very dangerous position in world affairs. Investigate the situation through Technocracy.

—George A. Kellogg, 12247-3

SUBSCRIPTION ORDER

To: The NORTHWEST TECHNOCRAT
2208 8th Ave.
Seattle 1, Wash.

Enclosed herewith is \$.....to cover subscrip-
tion(s) to Technocracy's Magazines (rates listed as
follows):

- ☐ All Three Magazines, 12 months, 12 issues,
\$3.00. (All three publications *rotated*).
- ☐ THE NORTHWEST TECHNOCRAT, 4
issues, \$1.00; 12 issues, \$3.00. (Quarterly).
- ☐ THE TECHNOCRAT, 4 issues, \$1; 12 is-
sues, \$3.00. (Quarterly).
- ☐ TECHNOCRACY DIGEST, 4 issues, \$1; 12
issues, \$3.00. (Quarterly).
- ☐ This is a *new* subscription.
- ☐ This is a *renewal* subscription.

(Canadian orders payable in U. S. funds)

START WITH.....ISSUE

Name.....

Address.....

City..... Zone..... State.....

(or) City..... Province.....

(Foreign rates, other than Canada, Mexico, and U. S.
territories, 20% (50c) additional to above rates.)



TECHNOCRACY PROPOSES:

That this Continent has the resources, equipment, and trained personnel to produce and distribute a guaranteed abundance of physical wealth for all its citizens; that this will be accompanied by unsurpassed freedom and leisure; and, that this can be achieved only by a new form of social organization—technological operation on a Continental scale. It means the application of science and technology to social operation. In conditions of abundance neither value, price, money, business, nor politics can exist. Abundance renders unworkable our present system—the Price System.

This Continent's decision between abundance and chaos must be made within the next few years—and by an American majority. Technocracy's function is to inform Americans of their coming social responsibility. The social transition must be achieved without disorder or chaos. This demands intelligent organization now.

THE NORTHWEST

Technocrat

COMPLIMENTARY COPY

OCT. '54

IN THIS ISSUE:

- The Shock of Indecision
- High Ball
- What Does the Future Hold for America?
- Get a Load of This ...
- Juvenile Victims

No. 177 (Vol. XVIII)

25¢

Sec. 3, R. D. 12247
TECHNOCRACY INC.
Seattle, Washington





You Never Can Tell . . .

HOW MANY TIMES have you heard it said 'you never can tell what people will do' or 'what will happen' or 'what they (the engineer, scientist and technician) will come up with.' The phrase is usually used to disguise their ignorance. People who use these expressions show their inability to grasp the meaning of using scientific knowledge and research to produce, among other things, more grain per acre, many types of automatic recording machinery or more consumer products per man-hour. Through scientific research we are becoming much better equipped to 'tell what people are likely to do' and 'what most probably will happen' and 'what types and quantities of products are likely to be sold to you.' For example, the designer of an airplane can tell whether it will fly before he tries it and also how fast, how far, and what speed and altitude the craft will attain. The meteorologist can predict the weather quite accurately, given enough information or enough gathering points. So we find through the progress of science that we shall be able to predict ever more accurately what will happen.

After learning a few basic principles, axioms and postulates we can begin to understand the progress that has been made in the last fifty or one hundred years. The more one learns about the progress the men in science have made, the more one respects these people.

By a quick analysis one can ascertain how an individual will react to each circumstance. Under the rules of the Price System which allows certain people to chisel, these people will resort to all types of chicanery to obtain debt tokens for prestige and comfort. Unless there is some restriction, some of the people will come out on the short end. Knowing how people behave is but another part of knowledge and can be used to the benefit of all.

Unless one is guided to some specific knowledge,

most people will not seek out that knowledge. The impetus for seeking further knowledge must be the impact that an introduction to it has on an individual. We, in Technocracy, have known for years that a potential abundance has been with us and we have also known the effect an abundance would have on the Price System. This knowledge is becoming more evident every day. Our unemployment figures, overwhelming surpluses and the clearance sales are indications that something is amiss in this great land of ours. We have been pointing out for years that parts of this abundance have been scuttled, destroyed, stored in caves out of our reach or dumped into a war. Why don't you learn what can be done about this shameful condition present in our country today? JOIN TECHNOCRACY!

—George A. Kellogg, 12247-3

Cover Picture

Research Worker

This photo from the Association of American Railroads depicts the research and development work being carried on in laboratories and other facilities of America's railroads. Contrary to sometimes expressed fears, man is the master of the technology he develops and uses to improve efficiency and increase human comfort. His greatest problem is his fight against the interference of incompetence and cost factors in his work.

OCTOBER 1954

THE NORTHWEST

Technocrat

The Shock of Indecision

There is a growing feeling among individuals and even nations that their destiny is no longer a matter of their own choosing. With daily rumors and reports of an impending worldwide holocaust of atomic bomb explosions, people are becoming reluctant to think in terms of future stability or hold faith in a better world.

THE PEOPLE of the United States, collectively, appear to be in a stupor, as if they were in a state of semi-shock. They somewhat resemble a herd of cattle that has been on a stampede which has run its course. The individuals mope around, too bewildered and tired to know where they are at or what to do. The American people behave like a defeated people, one whose glory has been challenged and its motivations stymied. They appear concerned mainly with puttering and looking after the matters of day-to-day survival. Up until recently, the people of this Continent felt they were on the way to something, somewhere in the future; and this feeling imbued them with an intangible cohesion and vigor that transcended any overt organization or direction. They were like people on a long trek to a new territory that was full of promise. But, now, the 'journey' is over; the motivations that have carried the people thus far are gone; and the new horizon does not look as promising as they thought it would be. They must change their accustomed patterns of living and start out anew under difficult and unfamiliar circumstances. Consequently, they are stupefied by indecision about what to do and ignorance of how to go about it.

If the recognized leadership of the people understood the situation and knew what to do, this leadership could inspire the people with the thrill of a new adventure. But, alas, the leaders are even more confused than the people themselves. They have bluffed their way along until now

with noise and bluster, but they have failed to deliver. America's leadership is in the position of a side-show barker who has just put on a big act out front to lure the people into the tent to see 'a tremendous, a ferocious, a terrifying reptilian monster from the Valley of Demons in the darkest and most mysterious part of uncharted Africa!' And when the people pay the price and take a look inside the tent, all that meets the eye is a shriveled mummy of an unimpressive lizard. What the people then think of the side-show barker is not much different from what they are now beginning to think of their leadership personnel.

During the depression of the 1930's, the people were not so stunned as they are now. The unpleasantness of that situation was recognized as being due to an economic depression; and there was hope that the depression would end. The New Deal did seem to be fumbling for a way out (although few then realized that the fumbling would carry us into the financial successes of World War II). But, now, the people are stalemated at the height of their greatest prosperity boom. All discernible roads slope downward to 'worse times' and none point upward to 'better times.'

The American wage-earner saw his status in the economy rise during and just after the War to a level he had never before dreamed was possible. On the strength of wages incredibly higher than he had ever received before, plus some lush overtime and maybe a wife with a

job, the worker-for-wages bought a new home in the suburbs, filled it with a full quota of the latest new gadgets, bought an expensive new car, and settled back to become a conservative devotee of the status quo. It is true, high prices and heavy taxation chewed big chunks out of his pay checks; but, even so, he was much better off then ever before, and he could still see a rainbow in the future—once his debts were paid off.

Little Doubts Loom

Lately, however, the average wage earner has been harrassed by little doubts regarding his security. First, came the notification of his being released from overtime work. After that, the mortgage and installment payments loomed larger than before, and they continued to come due with irritating regularity. Grocery prices seemed to inch steadily upward in spite of the lurid reports of unmanageable food surpluses. Maybe his wife's employment became curtailed or intermittent; or possibly she got pregnant and had to stop working altogether. Then, perhaps, the employer began to violate in little ways the provisions of his contract with the labor union and the labor leaders called a strike, although to the worker a strike appeared to be just what the employer was trying to provoke. Doubts about the integrity of the leaders of his union began to plague his mind. While on strike, he probably looked around for a job elsewhere, but learned that jobs are not so easy to find now as they were a few years ago. In due time, he voted with the other workers in his union to go back to work at conditions only slightly, if at all, better than before the strike. But, even so, the company is taking its time in getting the work underway, and not all of the workers are called back. Rumors are buzzing around that the employing company is overloaded with inventory and may have to shut down altogether. There are enough examples of that very thing happening elsewhere to lend substance to the rumors. The worker realizes that he cannot make a go of it on unemployment compensation alone. He wonders what will come next, but he feels that, whatever it is, it will not be to his liking.

The few million people remaining on the family farms are seriously wondering if the small farmer has a future. They see large numbers of the small farms around them falling into the hands of the agricultural corporations, while others are being consolidated into the farms of their more successful neighbors, who, incidentally, are forced to take in

more land to utilize and finance their strings of modern farm machinery and their new buildings. As prices for many farm crops settle downward, and as government controls tend to restrict the raising of cash crops, the capitalization and operating costs take an ever greater percentage of the gross income. The children display scant interest in carrying on the work of the farm, while the cost of hiring labor in competition with industry is prohibitive to the small farmer. All he can hope to do is carry on for a while longer then liquidate his assets and 'retire' to the suburbs.

The little farmer was in the majority only a few decades ago. He was considered the backbone of the nation. To all appearances, the future of America revolved around him. But, already, his day is fading into the sunset and his sun will never rise again. For nearly a generation now, he has been on government relief in one form or another. The bright bloom of recent wartime prices has faded, and with it goes the hope that inspired him to contract more debts in a hurried attempt to acquire respectability in the society. Few farmers now envision security and stability through the coming years; and they are indecisive about the next move.

Going into Business

The wartime scarcities and high prices of consumer goods inspired many little people to go into business for themselves after the war. Millions of little plans for private success flourished in the minds of those who felt confidence in their abilities to outwit the economic system. With so much credit being slopped around, it was inevitable that examples of success should be common enough to lure many others into private enterprise. And there were, indeed, some spectacular successes, but a large part of these grew out of a cunning ability to capitalize on the calamity of others who failed, while some resulted from fortuitous or crafty acquisition of war surpluses at sub-bargain prices. In any event, the great majority of the optimistic hopes and plans for free enterprise success became wrecked when too many people got into the act. The would-be little entrepreneurs soon became disillusioned and undecided about the future. Most of them have either liquidated or are looking for a chance to do so. Big Business is moving in and gobbling up little businesses or otherwise forcing them out of existence. The government isn't making good on the political promises of aid to little business. So, the little businessman is left with no other thought than how to get by from month to month.

Of course, Big Business has its problems too. To be a success, a big corporation must make profits and pay out dividends. If one has a monopoly control over something that is a virtual necessity, like the telephone for example, one can be as lackadaisical about making improvements, and be as insulting to the customers, as one pleases and still be a success. But in most lines of Big Business, there

MY TWO CENTS WORTH

I notice by the radio and the papers they make a big fuss over all the people who get killed by cars on holidays, but they don't say much about people who get killed on other days. Uncle Zeke says more than a hundred people get killed EVERY day of the year, and so you should expect more than 300 people will be killed on a long weekend even if there isn't a holiday. He says, if you get killed on Saturday, Sunday, or Monday, you make news; but if you get killed on Tuesday, Wednesday, or Thursday, they just bury you and don't say nothing.

Whenever we have a holiday, the president and other people on the radio come out and beg people not to get killed, but it doesn't seem to do any good. I don't think people try to get killed. They just go for a ride and something happens suddenly, and that's that. I was in a accident once. We were driving down a country road minding our own business and a car came from the side without stopping and hit us. He didn't try to hit us; the weeds were just so high he couldn't see us coming. Nobody was killed, but that goes to show how accidents can happen. That's why they call them accidents, I guess.

It seems to me they could keep more people from getting killed if they fixed the roads instead of making speeches. There used to be a lot of people get killed by trains running into their cars at crossings. After they built the roads up over the tracks or down under them, people don't get killed there anymore. I think they make the cars so they will go too fast and they let too many people drive them. But, I guess, in a democracy you have to let some of the people get killed or they will think you are taking their freedom away.

—IMA MORON

is competition, either at home or abroad. There is a struggle to get ahead or stay ahead of the competition; and that requires two general things—maintain a high volume of sales and keep a wide spread between the pro rata cost and the selling price of the items handled. These requirements demand that the corporation's product have special features that appeal to the consumers and that the cost of production be held down while the selling price is held up. In this struggle, big corporations often buy up the patents and facilities of other corporations, sometimes merely to eliminate them as competitors; they mechanize in order to produce goods faster at less cost; and they enter into tacit agreements with other corporations not to cut prices to the buyers. But, in cutting costs through disemployment of workers, Big Business is curtailing the purchasing power of its customers. This purchasing power can be enhanced only through the creation of new debt, including installment debt.

Business Mergers

The consolidation and mechanization of productive and merchandising enterprises results in fewer enterprises, with fewer employees, handling more business. But, to cut unit costs substantially, it is necessary to organize for such a volume of business that only one or two corporations can handle all that the country requires of that particular type of product. If you are going to be one of the survivors, it is imperative that you get there first; but, if you are not big enough to make it, you may as well fold up. The so-called independent automobile corporations are learning that lesson at the present time. Consolidation and mechanization of Big Business enterprises is keeping the successful operators occupied for the present. Their major concern is the question, which of the present survivors are going to win out in the final competition? And, if one does win out, what then? It acquires a social responsibility it cannot escape; for, it must live up to its responsibility to produce its particular goods or service, or else. There is no one else to pass the buck to or to share the blame with. The corporations that are already eliminated have no future to plan for; their last main concern is to salvage enough from the physical remains to retire their top executives in comfort for the rest of their lives. The situation, thus, is one of apprehension for the few big corporations that appear to be succeeding and futility for the many lesser ones that are stranded.

The export-import enterprises are in the doldrums.

In the first place, large areas of the earth out 'out of bounds' to American commerce as the result of Cold War political edicts. Other large markets are being closed off as the nations concerned develop their own technology (often with American aid) and no longer need to trade raw materials abroad for manufactured goods. The emphasis on American imports is in the realm of raw minerals—petroleum, iron ore, copper, lead, zinc, uranium ore, and many lesser metals. The emphasis on exports is in the realm of military supplies, much of which are forced upon our 'friends' on a give-away-plus basis. (This is analogous to an automobile dealer offering to throw in a thousand gallons of gasoline with each car you will take off his hands as a gift.) On the basis of an exchange of necessities or virtual necessities, the world commerce is shrinking and will continue to do so. Almost every technologically developed nation is seeking a dumping ground for exports but is reluctant to accept imports in exchange.

Officer Prestige

World War II permitted the buildup of a tremendous military establishment in and around the United States, along with a huge officer personnel. A large proportion of these officers were satisfied with their superior status and wanted to make a career of it. But, with the end of the war, the military establishment disintegrated and with it went the prestige and advantages of the officer class, along with most of the officers. There is nothing more disheartening to an ambitious military man than peacetime conditions; but, in spite of numerous efforts by the top brass to provoke a war, no worthwhile war has materialized. (The humiliating setback in Korea is something they would just as soon not talk about.) With the atomic bombs being ballyhooed as the Big Weapon of the next war, with a growing preference among our allies for a 'peaceful co-existence' with the rest of the world, and with a negative enthusiasm among the American people for a 'preventive war,' the future of the traditional military man appears devoid of glamor and inspiration. This frustration is further characterized by jealousy and conflict within the Armed Forces, involving among other things disputes over which branch is to get the biggest appropriations and the preference of assignments.

The political and diplomatic negotiators of America, who have the task of preparing the way for military hostilities, are even more frustrated and stymied than the military enthusiasts. They have tried every type of dealing known to them (and

they know all the types), but they haven't been able to win allies or provoke enemies. They did everything they could to undermine the recent Geneva Conference on the Indo-Chinese War and were defeated. Then they attempted to drag their allies into a Southeast Asia Treaty Organization (for aggressive military purposes) only to meet up with suspicious restraint on the part of said allies and condemnation from the neighboring neutrals. Thus, the great Eisenhower Crusade can count on support, and a very dubious support at that, from only a few gangster riff-raff elements around the globe, principally: Syngman Rhee of South Korea, Chiang Kai-shek on Formosa, some small Catholic fascist cliques in the Philippines and southern Viet Nam, a mercenary monarchist oligarchy in Thailand, a Mohammedan fascist clique in Pakistan, Franco in Spain, Salazar in Portugal, a small Catholic fascist clique in Benelux, and a smelly assortment of Catholic fascists in Latin America. The most recent dodge to involve the United States in a major war is the getting of Chiang Kai-shek's Formosa remnants to make provocative raids on China in the hope that the Chinese will retaliate in sufficient force to permit the trigger-happy U. S. Navy and Air Force to jump into action. But, all in all, it is a sad and discouraging situation as viewed by America's proponents of military aggressoin.

On the domestic front, American politics is milling around in a dead-end alley. The two political parties are without distinguishing issues; and there is more division and bickering within party ranks on both sides than there is between the parties themselves. Then most of the so-called issues are of a picayunish nature. The old issue of 'communism' has become so over-worked and under-nourished that it is ready for the ash-can, along with one discredited J. McCarthy who has had the number one job of kicking it around.

Helping Big Business

The Eisenhower Administration has done more to help Big Business loot the public domain than any other recent administration. Under the phoney slogan of 'Let's take business away from the bureaucrats and give it back to the people,' the Eisenhower Administration is rapidly disposing of the public property entrusted to the care of the United States Government, virtually giving it away to the Big Business friends of the Administration. In the meantime, tactical efforts are being made to appease

(Turn to Page 12)



The modern locomotive cab is fully equipped for the comfort and convenience of the engine crew, and features rapid communication between the engine and train crews and wayside tower operators, through the use of the hand-set telephone. The man-hours saved help to speed the nation's freight to the consumer. (Photo courtesy Santa Fe Railway)

'High Ball!'

THE ASSOCIATION OF AMERICAN RAILROADS reports that railroads in the U. S. have spent more than nine billion dollars modernizing and improving the 223,000 miles of track and equipment that constitutes the rail transportation system. The resulting speed-up in the movement of freight and passengers lends real meaning to the railroad slang term, 'high ball.'

Diesel locomotives are doing eighty per cent of the work on America's railroads. Gas and steam turbine, and atomic energy locomotives may soon assume a significant share of the burden of moving goods and passengers by rail. Though the Diesel locomotive is four times more efficient than the old

steam locomotive, already it is becoming obsolete as the search for greater efficiency continues.

Time is precious in business, because the less of it consumed in doing work, the greater the profit in dollars and cents. This is by far the greatest motivation of business in railroading to mechanize, and thus to eliminate the human being wherever possible. The radio-telephone system in rather common use today saves much time in transmission of signals between trainmen and engine crews. Also, it shaves the margin of possible accidents. The Centralized Traffic Control system is another innovation of recent years which is coming into wide use, making it possible for the train dispatcher to

observe the movement of trains on his division, and to control their movement from his office by operating block signals and throwing switches miles away with his finger tips. Time is saved when trains do not have to stop and wait for members of its crew to throw switches. Split second co-ordination is a reality when technology makes it possible for one man to observe and operate a whole system like a division of a railroad. The wheels keep turning.

Everywhere in railroading the emphasis is on speed. There are many miles of railroad in the U. S. where the speedometer of an engine hauling a streamliner hovers close to one hundred miles per hour. It takes 'high iron' well cared for to risk high speed. The less the human worker has to do with such right-of-way, the better. The railroads employ electronic devices to detect flaws in the rails. To rely on human eyesight is too slow and dangerous.

When rails must be removed on the modern, high-speed railroad, or when new track is to be laid,



The Audigage detects what the human eye cannot see in checking rail joints. It supplements the work of the rail detector car. A two-man team of operator and watchman can test 600 joints a day. Heart of the device is a quartz crystal vibrating at several million cycles per second.

(Photo courtesy Reading Company)



Among the modern machinery used in track maintenance work is the multiple tie tamper. Tie tamping machines are employed in teams in surfacing track uniformly.

(Photo courtesy Western Maryland Railway)

we don't see great gangs of men in evidence as the work progresses. Machinery, operating with precision and without tiring, pulls and drives spikes, tamps and cleans ballast, and handles ties. Ditcher-spreader machines keep the right-of-way clear and properly drained. The numerous, dirty and exhausting tasks formerly handed to the 'gandy dancer' now are being done by machinery. There is evidence that many former section gang laborers are standing around with their hands in empty pockets.

The ribbons of steel that crisscross North America frequently terminate temporarily in great freight yards, where incoming trains are broken up and the cars reshuffled to form new trains destined for points from a few miles to several thousands of miles away. The job of classification and handling of perhaps several thousand freight cars in a day is a pretty big problem. The switching operations undertaken a few years ago were inefficient because too many human beings were involved. Switch engines used to shove a cut of cars up over a 'hump' in the yard, allowing them to roll down the other side to give them momentum which would carry them down into the yard and onto the track for which they were scheduled. A 'rider' had to ride each car down the hump into the yard, applying the hand brakes on the car as necessary to



Finger-tip control truly is the phrase to apply to the Markham Yard (above) at Chicago. The vast array of equipment and rolling stock in this classification yard is handled, primarily, by the man pictured after the freight cars leave the 'hump' and roll toward the track assigned for them.
(Photo courtesy Illinois Central Railroad)



At the time of its completion in May, 1954, this coal burning gas turbine electric locomotive was the largest single unit locomotive in the world. Its 4,500 horsepower flows through its 6-6-6-6 wheel arrangement. Designed for road freight service, its top speed is about 60 MPH. This and other developments in motive power for railroads suggests obsolescence for the diesel locomotive on the railroads of tomorrow, and a further decline in man-hours in the movement of freight.
(Photo courtesy Norfolk & Western Railway)



Modern track-laying and maintaining equipment speeds the never-ending job of keeping the nation's tracks in condition. Modern machinery, operated by maintenance-of-way employees, renews the roadbed in one smooth operation. Machine nearest the camera removes ballast from between the ties. (Photo courtesy Norfolk & Western Railway)



This Jordan Standard Type Spreader-Ditcher is a composite machine used in railway construction and maintenance as a Spreader, Ditcher, Ballast Plow, Ballast and Roadbed Shaper, Snow Plow and Ice Cutter. The ditcher wings are designed to cut the individual roadbed cross section of the railroad. Cutting edges on the front plow are adjustable. The man-hours displaced with this equipment are manifold.

(Photo courtesy Chicago, Indianapolis & Louisville Railway)



Welded rail permits smoother travel with less maintenance cost. This is 'high iron,' but when the track width is spread to ten feet, as proposed by Technocracy, operation will be at much higher speed than now, and even smoother.
(Photo courtesy Delaware & Hudson Railway)

keep it from smashing into the string of cars it was headed for. This was hard and dangerous work, and costly in terms of labor, because it was slow at best.

In recent years push-button yards have been installed in which handling of freight cars is done from a tower. Retarders between the rails slow the car down after it leaves the 'hump' to the speed at which no damage will occur when it couples into other cars. Few switchmen are needed in such an operation. One hundred cars per hour can be handled in such a yard! The goods that North America can produce moves ever faster to the market. But here, again, the man-hours which represents money to buy these goods are being replaced with technology.

All of this is a far cry from the days of Casey Jones, when a strong back and a number 2 scoop shovel baled coal into a scorching firebox to keep a head of steam; when the lives of those on a train depended on the engineman's eagle eye and his understanding of the train orders given to him. The wail of the steam whistle is gone forever, and with

its passing has gone tens of thousands of jobs on the railroad.

As in every other industry, the railroads have discovered that in order to increase efficiency of operation, the modern research laboratory must be used. The objective must be to get the human being out of the way, and to use technology instead to perform operations wherever possible.

The pictorial account of railroad progress accompanying this article gives one some idea of the degree of success which has been achieved in recent years in improving railway transportation.

This progress is wonderful. It gives prospect of abundant living for all North Americans. The only trouble is that under the Price System, with price tags hung on everything produced, the more we are able to produce with technology the less we can buy. At the risk of unnecessary repetition, it is again pointed out that technology increases production but it also eliminates man-hours. Since, under the Price System, the only way we can make a living is to sell our man-hours to someone in return for a wage or salary with which we buy goods produced, it is rather obvious that technological progress under the Price System will create great difficulty for millions of people in the near future, in addition to those whom such progress has already affected.

It must be remembered that the past fifteen years of prosperity were the direct result of U. S. participation in war. The vast industrial expansion and improvement has given North America a capacity for production of goods and services that it is not prepared to distribute, and which cannot be sold under its present social system. Continuing and accelerating technical progress is making the problem more acute with time. With the exception of Technocracy, not one group nor organization has concerned itself with research and analysis of this problem of social change, so that a solution could be developed. When it is suggested that action must be taken to meet the problem before things are really upset, the typical nebulous reply is: 'We've always found a way.'

Technocracy says that it is time to start 'high balling' toward the answers to North America's real problem. Technocracy stands pat with those answers. One of these days the citizens of this Continent will be damned glad Technocracy stuck around to see them through a successful adjustment to the greatest social change in the history of mankind.

—Harry Briggs, 12247-1

THE SHOCK OF INDECISION

(Continued from Page 6)

large blocs of voters by careful geographical placement of atomic energy plants, 'defense' plants, and subsidy allotments to private enterprise, along with tactical price supports to producers and the sanctimonious blasting of large holes through the wall that separates church and state.

But the situation on this Continent is not one that yields to political or business finagling. We are faced with the problem of a productive capacity that far exceeds the capacity of the distributing mechanism of the Price System. And for that malady, there is no positive remedy in the alchemy shops of politics and business. The old slogans have become recognized as frauds—'machines make jobs,' 'more efficient production means more goods at lower prices,' and all that sort of tripe. The warehouses of the country are overloaded. Millions of people (the exact number is a hush-hush secret) are off the employment rolls or on reduced time. Purchasing power in the hands of the consumers is declining and with it general business activity. Unless some way can be found quick to create new debt on a huge scale, the economy will be forced into a downward spiral. But, the brighter of the political economists warn that, since the nation is now in hock for all or more than its appraised value, any new debt will merely increase the efficiency of production and inflate prices without increasing the physical volume of retail business.

No Realistic Direction

Thus, America's progression to the goal of two cars in every garage and two chickens in every pot has run its course; but, now that we have 'arrived,' we find that we cannot keep up the overhead or enjoy the results. The whoopla (carried chiefly in our business magazines) for bigger and better economic gains through the next 25 years, including a goal of two houses for every family, is only so much eye-wash. It provides no realistic direction for the national economy. In view of the world's resource situation, with particular emphasis on that of continental United States, the strategic necessity is one

of reducing costs in terms of irreplaceable raw materials, not increasing them. Price System expansion is predicated on an ability to 'come by' increasing quantities of scarce mineral resources.

The day of self-supporting free enterprise ended some decades ago. Without government support, chargeable to the public, private enterprise could not keep operating at all, and that includes agricultural enterprise. Thus, corporate enterprise has become the ward of the government, and it is fast becoming heir to the government. The Eisenhower Administration is serving as the executor for the transfer of the public heritage, as well as the governmental powers, to the big corporations, with large 'charitable' contributions being given to the major clerical blocs. But, in order to get away with it, this give-away program must be camouflaged with double-talk to the extent that both the public and the politicians themselves have little knowledge or understanding of where they stand or what the basic issues are. In the process, free enterprise ceases to be free and it loses all pretense of being benevolent. If it could be kept within bounds, this trend would lead directly into fascism and another historical dark age.

Agents of Progress

The bright spot in the social picture of this Continent is the prominence and prestige of science and technology. These refuse to be put in a freezer by the authoritarians, and they keep thawing big holes through the icy crust of fascism. Consequently, even the negative roadway to fascism is blockaded and broken and is unable to offer 'security' and 'stability' to the American people. The authoritarians are hard pressed to keep even a cadre of their superstitions intact, much less be in a position to capture the minds and wills of the great majority through a pretended monopoly control of all knowledge and insight.

Along with these physical social developments, there has been a steady decline in the general intelligence of the population; so that, as a situation develops which calls for greater intelligence, the ability of the people to comprehend it and act judiciously is diminishing. This trend contributes further to the present confusion and indecision.

The basic social unit, the family, is no longer held intact as an integrated body. The patterns of life have changed so much during the past two decades that the parents are strangers to their children and vice versa. Their respective concepts and outlooks

and their behavior patterns are widely at variance. The parents are no longer capable of providing acceptable guidance to their offspring; and, very early in their lives, the children acquire an unconcealed disdain for the views and authority of their parents. But, the children have no positive social concepts of their own, certainly none of use to the social management of an area. They have a vague confidence that, given the same means and opportunity their parents had, they could, as individuals, do much better in the system. The lush debt creation of World War II provided them with a confidence that is unlikely to be sustained in the years ahead.

Then, there is a growing feeling among individuals and even nations that their destiny is no longer a matter of their own choosing. With rumors of visitations by 'unidentified flying objects from outer space,' and with more definite and precise reports of an impending worldwide holocaust of atomic bomb explosions, people are becoming reluctant to think in terms of future stability or hold faith in a better world.

All of these factors lead to a general lessening of confidence in human ability and destiny. This is manifested now in a collective stupor, somewhat like that which overwhelms the members of a family which starts out joyfully on a vacation trip only to have one mishap or frustration after another stifle their enjoyment of it and deplete their finances, so that they have to come home prematurely, disheartened and disgusted. The leadership of the nation is in the position of a pugilist who has won his way to the world championship only to find that nobody wants to fight him, that nobody is interested in watching him fight, and nobody wants to promote a match for him, with the result that he is bewildered and undecided what to do next—whether to go berserk and tear loose on a destructive rampage or go off in a corner somewhere and sulk moodily over the injustice of it all.

This general state of confusion has certain distinct advantages, however; for, as opinions become discredited or confused, the way is opened for a less prejudiced survey and appraisal of the situation. If you don't know which way to go, you are in effect free to go in any direction. Further, you are in a mood to be discriminating about the choice of direction. Under those circumstances, someone you know may point out the broad smooth highway to the New America and find you willing to give him your attention. This is the way to Abundance, Security, and Freedom from Toil which Tech-

nocracy has prepared for you—a positive road to a new social order based on science and its technological application to the means of human dignity and welfare. Consequently, you and others may choose to join in a mass movement to this new and brighter Destiny. So, you see, all is not lost. The present shock of confusion and indecision is not a permanent condition, but one that will yield to the 'discovery' of a new and greater goal for the people of this Continent and the realization that competent directors are available to show the way.

Thus, the end of an era does not necessarily mean extinction for the human race. It can mean the beginning of a new and more glorious era. For lack of competent direction, the dinosaurs went down to extinction when they came to the end of an era; they did not know how to adapt to the conditions of the following era. But human beings do not have to be like the dinosaurs in this respect, at least not all humans. Technocracy urges you to capitalize on the calamity of confusion and indecision that is overwhelming the old social order and make of it an opportunity to help advance the civilization of North America to greater social heights than any yet achieved by mankind.

—Wilton Ivie, CHQ



DEVELOPING TRENDS

TWENTY PER CENT DROP IN YOUTH JOBS

Regular or part-time jobs were found by nearly 20 per cent fewer youngsters during the first six months of this year than during a similar period last year, according to the Board of Education.

Arthur Clinton, director of the Bureau of Attendance, said that 17,688 fewer working papers were issued to boys and girls between 14 and 17. According to Clinton, 74,639 permits were given this year against 92,327 last year.

"Slackening business conditions have made it more difficult for young people to find regular jobs or part-time jobs after school hours," Clinton said.

The bureau issues permits for either full-time jobs for pupils who wish to leave school at the age of 16, or restricted permits for after-school or summer work.

—New York Daily Times

—This, also, indicates that there will probably be no extra jobs for the estimated 700,000 new workers coming on the labor market next year. Technological disemployment will also add another huge number to the pool of 'surplus workers.' Perhaps Uncle Sam will be forced to 'buy up' the 'surpluses' and store them somewhere to keep them off the market.

WHEAT CARRYOVER HEAVIEST ON RECORD IN N. W.

PORTLAND, Ore.—The largest wheat carryover on record in the Pacific Northwest was reported recently by the Federal Crop Reporting Service.

The total carryover on July 1 was 79,316,000 bushels, which was 51 per cent more than the previous high of 52,519,000 bushels in 1942.

The carryover was three times greater than that of a year ago.

The total by states: Washington 57,350,000, Oregon 16,070,000, Northern Idaho 5,896,000.

—Seattle Times

—It begins to look as though the 305 ships of the reserve fleet which are being used to store grain will not be sufficient.

AUSTRALIA AGAINST U. S. CROP GIFT

CANBERRA—The United States would dislocate world trade if it embarked on a give-away campaign for its "positive mountain" of surplus farm products, Commerce Minister John McEwen told House representatives recently.

He said nothing but chaos would result if Australia surrendered its opposition to the United States giving away produce.

—Associated Press

—Poor Uncle Sam! He can't play Santa Claus either at home or abroad under the Price System. Question: Shall we scrap Abundance or the Price System?

MORTGAGED TO THE HILT

WASHINGTON—Senator Harry F. Byrd (D-Va) declared that the nation is "mortgaged to the hilt" and that there should be no permanent increase in the public debt above the present \$275 billion ceiling.

Byrd warned against continued deficit spending as the Senate began debate on the bill to boost the debt ceiling temporarily by \$6 billion, with a provision cutting it back to \$275 billion next June 30.

The Virginian emphasized, however, that the present federal debt, which is close to the ceiling, is nearly 2½ times the combined debts of 12 European countries, most of which are receiving aid from the U. S.

Debt's Equivalent

He declared that the present debt "is equivalent to the full value of all the land, all the buildings, all the mines, all the machinery, all the livestock—everything of tangible value—in the United States."

"Actually, we should be reducing the debt at this time, not increasing it. If we cannot balance the federal budget and reduce the debt in peace and better-than-normal prosperity, when can it be done?"

—International News Service

—'When can it be done?' Ah, for a crystal ball or a magical formula. A blind alley has been entered and the end is in sight but there is no way to turn around or back out. Better see your friends, the Technocrats, they have learned the answer.

PETITIONS FOR BANKRUPTCY ARE UP 40 PER CENT

Petitions for bankruptcy filed in United States District Court here so far this year show an increase of 40 per cent over the number filed in the first seven months of last year.

Millard P. Thomas, clerk of the court, reported 307 filings to the end of July last year. Filings so far this year total 431. Sixty-five petitions were filed this month; 57 were filed in July, 1953.

Most of the filings are for individuals or small businesses, Thomas said.

—Seattle Times, July, 1954

ROBOT MACHINE

SENECA FALLS, N. Y.—Seneca Falls Machine Co. demonstrated an automatic machine whose output theoretically saves a manual operator up to twenty tons of lifting a day.

The new machine, designed specifically for automatic manufacture of automobile cam shafts, is composed of two "lo-swing" lath, coupled with automation equipment. Rough shafts move into the machine on a track and are picked up by two finger-like devices that load the first lath for turning. The same finger-like device lifts out the half-turned shaft,

THE NORTHWEST TECHNOCRAT

reloads the second and carries the shaft to a tray which turns it around for complete finishing.

If a man could match the machine's output of 112 completed shafts an hour, he would have to lift special cast iron shafts at a rate of 5,047½ pounds an hour, or 40,380 pounds a day.

This, quite naturally, is one of the main features of the machine. The basic unit lists at \$50,000. It operates electrically with certain controls powered by air pressure.

Edwin Smith, president, declined comparison with normal manual operations, but pointed out that the standard procedure would be limited entirely by what the individual operator could physically stand. The automatic machines, he added, operate on about a 90 to 95 per cent efficiency basis.

—New York Herald Tribune

ISOTOPES SAVE TIME

NEW BRUNSWICK, N. J.—American industry is saving an estimated \$100,000,000 a year, and ten years hence may save \$1,000,000,000 a year through the use of radioisotopes, Joseph Campbell, a member of the Atomic Energy Commission, said here.

Radioisotopes are atoms that act like little radio stations. They send out signals that can be detected and measured on instruments. Minute quantities of a material that has been "tagged"—that is, made radioactive—can be traced by an atomic detective wherever they go in metals, fluids or the human body.

For example, radiation emitted from a "tracer tool" containing radioisotopes is passed through a steel casting to make a photographic record of the interior on an X-ray film. This shows whether the casting has any hidden defects.

Mr. Campbell said pipeline companies saved an estimated \$500,000 a year by using radioisotopes to trace oil in pipelines.

"At various places along the lines there are switch points where the products are diverted," he explained. "There are also places where the various grades of oil meet. It is essential that the operators know when a product is about to come to a switch point so that the proper valves can be opened at the proper time. By adding the radioisotope antimony-124 to each type of oil in the line and by attaching a Geiger counter to the outside of the pipe at the diversion point, a new type of oil automatically announces its arrival to the Geiger counter, and the operator has but to adjust the valve."

—New York Times

ELECTRICITY FARMS

NEWVILLE, Pa.—More than 300 representatives of the agriculture and electricity fields joined John Stamy, 36-year-old Cumberland County dairyman, in inaugurating what farm experts call the most completely electrified farm in the country.

Mr. Stamy flicked, turned and pushed an array of switches, knobs and buttons that set in operation more than \$30,000 worth of electrical equipment that is calculated to double the work output of his 280-acre farm.

The elaborate electric network can use 150,000 watts, enough energy to light 2,000 average light bulbs.

Jack Lange, farm supervisor for Pennsylvania Power and Light, said none of the equipment installed on Mr. Stamy's farm was experimental. All of it is in production.

On Mr. Stamy's farm cows are milked with the latest milking equipment which pumps the milk through glass pipelines into a 1,000-gallon refrigerated storage tank. The process keeps air from touching the milk until it is taken from the bottle.

Electricity fills the silo and unloads it. An electrically driven barn cleaner sweeps out the dairy building in a few minutes, while huge ventilating fans maintain the proper temperature for animals and at the same time cure hay.

An intercommunication system links all buildings and there is a special fire-alarm system. Mr. Stamy's home is equipped with a wide variety of electrical appliances.

—New York Times

—The kilowatt goes to work and what happens to the farm population? See the Census Bureau report in another item on these pages.

FARM POPULATION DROPS 750,000

WASHINGTON—The Census Bureau said its estimates indicate that farm population fell off from spring, 1953, to spring, 1954, by 750,000 persons, reducing the number of persons living on farms in the United States to 21,890,000.

—Associated Press

IN BUSINESS AGAIN

Kartiganer Hat Co., which has run into financial difficulties, expects to get back on its feet because its employees will lend it \$200 apiece.

Charles H. Kartiganer, president, said the company 'could get plenty of business but we couldn't get cash.' Some 400 of its 500 workers here had been laid off. They would start returning to their jobs next week because:

Employees have made pledges and contributions totaling the \$100,000 needed to assure operations.

The A.F.L. United Hatters, Cap and Millinery Workers will lend the company another \$50,000.

Mr. Kartiganer expects to raise another \$75,000 to \$80,000 to pay off creditors.

The company's plant here is said to be one of the largest factories in the country making women's hats. Its sales last year amounted to \$6.5 million. Kartiganer has another, smaller plant at Beacon, N. Y., where the same fund-raising campaign is going on.

Arrangements for the employees to get the money they will lend the company have been made with the Milford National Bank Trust Co., the firm's local banker. Loan forms were available this week at both the West Upton and Milford, Mass., plants. The company had operated in Milford for 21 years but had to close the plant in June. Some employees made cash payments.

The money provided by employees and the union will be used for working capital, exhaustion of which led to the company's financial difficulties.

—Wall Street Journal

—Instability is the keynote in this as in the recent union loan of \$5 million to Frehauf. Further confirmation of its imminence can be seen in the rush of mergers that is the order of the day. Technocrats have long waited this trend. Let labor come out of its hypnotic sleep, realize that its sparring with business leaders has a counterpart in alleged 'grudge bouts' between wrestlers who go out for steaks together just after the show.

Have You Observed?

... **Morale** of the armed forces of the United States is reported to be low. It has been revealed that servicemen AWOL number about 1,000 per day. Apparently, the prospect of spending two years of one's life in the service of a country in which the leadership gives no evidence of intelligent objectives does not appeal to the youth of the United States. After all, men will die for an objective that is considered worthwhile. But who wants to die for the objectives of business, politics, and ecclesiastical crusades?

... **Another** revelation of youth's disposition not to be sacrificed in the name of the North American Price System was reported in the state of Illinois, where 8,000 young men are said to have deliberately committed crimes after being classified 1-A by their draft boards so that they would be rejected on moral grounds. As a general picture, Eisenhower's Crusade has every appearance of falling flat on its face.

... **If wishing** and hoping would make it so, the Price System of the United States would now be overflowing with prosperity. But the fact is that things are not going so well. Six counties in Virginia have received \$988,000 in surplus foodstuffs in recent weeks. The 50,000 persons who are recipients of this relief probably are not entertaining illusions about the prosperity they are supposed to be enjoying. It's the first time since 1942 that relief in this form in Virginia has been necessary, according to the State Department of Agriculture. High and increasing unemployment is bringing the need for outright relief to many areas of the United States. The relation between war and business prosperity is too obvious to require explanation.

... **The latest** in a string of broken promises by Eisenhower to the American people is failure to balance the budget and stay beneath the legal debt limit of \$275 billion. Going in debt further and further is the only way that the debt of yesterday

can be paid off. Improving methods of production cause goods to be produced faster with fewer men, which means that the government must spend more—not less—money to keep the economy 'stable.' New jobs must be created in order for the public to buy what is being produced now. If this sounds like the WPA days, well, that's exactly what is in prospect. Pipe Eisenhower with his \$50 billion road building program. We do not mean to be particularly critical of republicanism. It's just that the republicans are even dumber than the democrats—if that's possible.

... **In August**, two developments, among several happenings unfavorable to American business and politics, must be alarming to the U. S. State Department. British dignitaries had a high old time honking highballs with no less a personage than Premier Georgi Malenkov himself. The announced purpose of the meeting was to improve trade relationships with the Soviets. Almost simultaneously, Japan announced a revision of policy which would permit extension of trade relations with the Chinese mainland. Since the U. S. can neither send its products to these countries for wide distribution because of the high labor cost of manufacture nor accept the products of these countries because of its own huge backlog of goods, the only course open to Japan and Britain is to extend trade relationships with the Soviet sphere of influence. We've priced ourselves out of the world market. It's that simple, and our friends are bidding us goodbye.

... **Technocracy** perceived many years ago that North America would be isolated from the rest of the world in trade by its own internal development. Now, we are beginning to understand what Technocracy is driving at. Things are happening fast. From now on, we are going to have to learn fast—or learn the hard way. The best and safest course of action for those who care is to join Technocracy now.

—Harry Briggs, 12247-1

What Does The Future Hold For America?

When the horse and buggy disappeared and was replaced by the automobile, man's customs and habits had to change accordingly.

HOW CAN one determine the nature of future events? It is simply a matter of design. The Solar System operates according to its design without the assistance, and in spite of the resistance or interference of man. It operates according to its design which is in turn determined by the natural laws governing the movements of bodies of this size, or any other size. The flow of energy is finally degraded into low temperature waste heat in strict adherence to the natural laws of thermodynamics.

Will the sun rise tomorrow? We predict that it will. However, we further predict that there will come a time when it will not. When all available energy has been degraded to the lowest temperature of the surroundings, all movement will cease and there will no longer be any changes and therefore, no time. The sun will then cease to shine. However, according to present estimates, the sun has existed for only about one-half of its life and we are fairly safe in predicting that it will continue to rise each morning for quite some time to come.

Man has learned to design physical mechanisms such as the automobile, airplane, streamlined trains. These mechanisms also operate according to their designs and in strict accordance with the same laws of thermodynamics and the laws of motion by which the solar system operates. And if man operates them according to their design they may be expected to continue in operation until they are worn out. The airplane is designed to fly through the air. Under correct guidance it can fly over mountains, cliffs, water or canyons. The same cannot be expected of the train, it is designed to travel on rails which are supported by something more solid than air or water and must not be curved too much either up or down or from side to side. Have you ever seen a train fly over a cliff without damage? Of course not, it is not designed to operate in such a manner. The automobile is designed to operate on highways and only by a change in its design can it be made to operate on rails.

We can only reach the conclusion that all physical mechanisms must be operated under conditions

for which they were designed. If the conditions change, so must the design of the mechanism if it is to continue to operate. If the design is first changed, then so must the conditions under which it operates.

Some years ago man learned to control the operation of the ox-cart. If he failed to operate it according to its design and drove it over a cliff, it would have been sad for the man, his family and friends, but the community would continue to operate as it had in the past. The nation was still a going concern and the world hardly noticed the difference. The damage one could do with an ox-cart was of a low order of magnitude.

With the advent of the streamlined train, modern industry and weapons, we have reached a higher order of magnitude of damage that can be done if men make mistakes. Just as we have observed the sun rising in the mornings, we have also observed man's increasing ability, through scientific investigation and application, to increase his production both for war and peace. The order of magnitude of the damage man can do is increasing rapidly. It is imperative that man learn to live in peace and harmony with other men and with his environment. Will there be changes in man's habits and customs in the future? If man is to continue to live at all, there will be such changes.

Adjusting to Change

When the horse and buggy disappeared and was replaced by the automobile, man's customs and habits had to change accordingly. Man resisted such changes because it was too much trouble to learn new habits and customs which were in tune with the new conditions necessary for the operation of the automobile. However, he found that not only could he not stop the spreading use of this new device, but that after all it did have certain advantages. The same men who ridiculed this new horseless buggy when it first appeared, purchased one for themselves and changed many of their customs

and habits to conform with the requirements of the new device. As for the present the number of highway deaths clearly indicate that man has other customs and habits which must be changed.

There was a time when man defended himself and obtained a large portion of his food by the use of the club. There was no community life. When he learned to use fire, long before he had matches, he found it less difficult to keep the fire going than to get it going again if it burned out. This required someone to tend the fire while others hunted food. The result was the beginning of community life. Man changed his customs and habits accordingly. This process, no doubt, was accomplished after many years of trial and error, agreements and disagreements, resistance of man to change vs. the necessity to change. Since that time man has found it necessary to change his customs and habits many times in order to survive. The fact that man has been able to change his ways so many times in the past, plus the fact that he still lives is proof that if given sufficient time, man can change his ways if it becomes necessary for his survival. The question is: can he change fast enough to keep up with the changes demanded by the rapid advance of modern scientific development?

Keeping His Mental Balance

Since the widespread use of the scientific method of energy conversion in the processes of production on this Continent is increasing the tempo and magnitude of that production, man finds it ever more difficult to keep his mental balance. His beliefs and opinions handed down from a remote and ignorant past cannot keep pace with our scientific advance. (Note the alarming increase of patients in our mental institutions.) We find that by the application of the methods of science to our means of production we now produce so much that our methods of distribution which have not changed fundamentally in over 5,000 years are bogging down under the load. We find that our own government is engaged in an attempt to maintain the old methods of distribution rather than allow an efficient technological method to be used. The government is taking our money to buy farm products and store them away so that when we buy these products for our own use, we must pay a high price for them a second time.

How does our system of distribution work? It works just like the one in Russia, Japan, France and elsewhere. It is a Price System. Any country that

affects its distribution by a system of trade or commerce based on commodity valuation and employs debt tokens or money is operating under the scarcity dictates of a Price System. It is a system which was designed to operate under conditions of scarcity. It can be made to operate as long as scarcity conditions prevail. At the present time and for several years in the past, it has been necessary to create scarcity artificially in America in order to keep the Price System in operation. Goods have been stored away to rot, sent abroad and designed to wear out quickly, while inventories and consumer debt are at an all-time high. And still other attempts are being made to maintain in operation the Price System with its scarcity concepts. Our trend of depressions indicates that this state of affairs cannot long endure. The WPA, the NRA, the AAA and many other schemes have been tried which at best only alleviated the symptoms while the disease remains.

Suppose we obtain records concerning depressions for, say, the past 100 years, and compile a chart showing the oscillations of economic activities; we note the percentage of shutdown of industry on the downward swings, the depression periods. Should this not give us some idea concerning the percentage of shutdown to be expected during the next depression? Suppose we go further and note the time between depressions and the rate of change of time between depressions along with the stimulants, such as war or other huge government spending. Should this not give an idea as to the time at which the next depression can be expected? Of course one must consider the increasing resistance to depressions but this can only prolong the trend for a short time and the fall will be faster when it does come. If our chart shows that depressions are becoming less severe, then we can expect the next one to follow the trend and cause less trouble than the last one. However, if we find that the trend is toward more severe depressions, we cannot only understand the increasing fear of depressions but the necessity for doing something about them as well. If we study our chart we will find that each major depression is approximately 30% more severe than the one previously experienced. The percentage of shutdown of industry for the past four major depressions are as follows: 1893-94, 27%; 1907-08, 38%; 1921-22, 57%; 1932, 79%. The order of magnitude is increasing. This trend **MUST NOT BE ALLOWED TO CONTINUE**, or complete chaos will result.

The increasing magnitude of depressions requires an increasing magnitude of change to prevent them.

Our means of production is a physical mechanism and must be operated in accordance with its design. Our Price System means of distribution must be operated according to its design if it remains in operation at all. Our means of production has been completely redesigned since the days of the ox-cart while our Price System has not. Either we must destroy our newly-designed productive equipment and return to the days of the ox-cart or we must completely redesign our distribution techniques in such a manner that they too will distribute the products of modern industry.

Since man has learned new methods of production he has forgotten the old. In the days of the ox-cart each family was an independent unit. Each family produced what it used. What it couldn't produce it did without except for a very few items which it was able to buy by Price System means from time to time. The living standards were necessarily very low. How many families in the United States and Canada could produce their own requirements today with the equipment used before 1870? To destroy our modern equipment would mean chaos. If we fail to redesign our methods of distribution it will also mean chaos. Our only chance to stay live is to recognize the problem and to do our best to obtain an understanding of the physical design necessary for survival.

Looking for a Way Out

What idea can we start with which will assist in working out a solution? Suppose for a moment that some method of production were found which would enable each family to produce what it needed in this modern society of ours. Suppose that each family had the natural resources and the equipment to produce its own clothing, food, housing, electric power, automobiles, plumbing, etc. Each family would again be an independent unit. This family would not need money, would it? It would not find it necessary to buy anything for it could produce everything it needed without outside assistance. Such a family would not need life insurance or banking facilities, credit or any of the institutions built around the debt creation functions. The individual members would not find it necessary to chisel each other because the total production of the family would be sufficient to satisfy the needs of all. The crime in such a family would drop to a very low point. A depression would not affect this family since it could produce what it needed and would find it unnecessary to produce more than it needed. It would not need money to trade with others. In-

flation or deflation would be only an unpleasant memory of an antiquated past in which the family production was insufficient.

What would be the incentive for each individual member of this family to perform his share of the necessary work? There would be no incentive to make money since none would be needed. Some work would be necessary, however, unless all operations were automatic. If they were not, there would be a great incentive to keep the operation going to maintain high production and distribution. Some work would be necessary since only the non-functional work would be eliminated because of the discontinued practice of working to make money. One works today primarily to get money to buy things. It is little different than working to produce things needed except one in this family would not find it necessary to work several hours extra each day to support someone who does nothing useful. The incentive to maintain abundance is the prospect of enjoying that abundance.

The only laws needed by this family would be natural laws with the few regulations required by a society which had no incentive for crime, or war. Lawyers and politicians would no longer be needed. The family would need no financier or promoters and advertising men. The most competent engineer would naturally be expected to provide leadership since he understands the operation of physical laws and knows the most efficient methods of converting resources into forms which are useful. He also best understands the designing, installation and repair of equipment.

Many would assume that it would be impossible for a family to produce all the modern requirements, but is it? That depends on the size of the family, the natural resources available and the equipment with which to work. Suppose that the family be quite large, say about 200 million people, its resources and equipment be that now existing on the whole North American Continent.

Directing People to Produce

Is abundance possible on this Continent? Observe the deluge of reports concerning 'surplus' farm products, observe the shoddy goods which are presented with glowing advertisements concerning their superiority, the large number of new and used cars which are continuously in the hands of auto dealers, the useless jobs performed by so many people in

(Turn to Page 27)



Part of the butter stocks purchased and stored by the Commodity Credit Corporation in a cold storage plant in Chicago.
(Photo courtesy of USDA)

GET A LOAD OF THIS . . .

STUPENDOUS? No. Colossal? Fantastic? No! Unfortunately, there are no words in the language to describe the pile-up of production from North America's modern industrial and agricultural technology. The glaring evidence of the failure of a distribution system is everywhere apparent. The people of this Continent, long misinformed and misled by the politicians, the public press and their own lack of ability to observe, are living in the midst of a near abundance of consumer goods. The so-called 'surpluses' which the United States Department of Agriculture has purchased under the price support

program reach heights which are beyond our ability to visualize. The business inventory in manufactured products is the highest in history. All the goods and services to make life more abundant are now a reality. Since the dawn of mankind's appearance on the earth, each individual has been striving for the day he can cease work and enjoy living as a pleasure instead of toiling as a drudge for an existence. Let us wake up, climb out of the rut, and look around us.

From a report by the Commodity Credit Corporation, dated June 16, 1954, we find that the Depart-

ment of Agriculture has stored 1,190,000 bales of cotton, while the wool in storage exceeds 117,000,000 pounds. Dairy products are held in the amounts of 422,220,000 pounds of butter, 401,982,000 pounds of cheese and 282,530,000 pounds of dried milk. In grain we find almost 9,000,000 bushels of barley, 12,410,000 pounds of dried edible beans, 371,000,000 bushels of corn, 124,560,000 pounds of grain sorghum, 7,800,000 bushels of oats, 18,320,000 pounds of rice, and 1,820,000 bushels of rye, and, at a cost of two billion dollars to our national government here in the United States, 721,166,000 bushels of wheat. (Later reports place this figure even higher.) There is also stored cottonseed oil, linseed oil, olive oil, tung oil, rosin and turpentine by the millions of barrels. Estimates in for the 1954 crop show another bumper year. The problem is no less acute for our neighbor to the North, Canada, where the largest wheat surplus in her history has found no market anywhere.

Looking for Storage Space

Storage of this huge stockpile of agricultural produce has given the United States and Canadian governments no end of trouble. In the United States 305 ships of the reserve fleet are being called into service as temporary storage bins for grains. Farmers are urged to dump grain on the grounds wherever possible or take out loans to build more storage space. Private concerns are guaranteed write-offs and rent payments, even on empty warehouses, if they will agree to store government produce.

Where this sort of thing will lead us warrants a bit of thought. It is a physical impossibility to continue to store mountains of produce which we cannot consume because, individually, we haven't the debt tokens (money) to buy. The farmers cannot cut back production without endangering their own security. We cannot give away the produce to hungry people in the rest of the world without upsetting the world markets. Already the Australian government has protested that if the United States undertakes any such give-away plan it will cause a panic in that agricultural export nation. Neither does the great area of Russia offer a market, for here again is a big producer of farm commodities, and is a competitor rather than a customer.

The plethora of manufactured products boosted the business inventories to new heights this last year, with automobile production at historic levels, small appliances jamming warehouses across the



Liberty ships of the reserve fleet of the U. S. Maritime Commission loading grain at Jersey City, N. J. Approximately 225,000 bushels of wheat owned by the CCC will be stored in each ship.
(Photo courtesy of USDA)

nation, and fabrics spinning out of near-automatic factories by the billions of yards. Steel production hit an all-time high in March of 1953.

The first signs of a weakening began in the steel industry in the fall and winter of 1953-54. Abundance was becoming a bigger problem than the politicians could cope with. The great project of 'priming the pump' instigated by the New Deal as a cure-all in the 'dirty thirties' was curtailed by the Republican Administration at the insistence of the big money that had helped put them in the driver's seat. The problem of distributing abundance had not been solved by the Democrats, now it was the Republicans' turn to try. However, curtailing the money which the government had been forced to put into the economy to keep it operating is one sure way of causing the economy to contract. Already about two billion dollars has been cut from defense spending. With the nation producing goods at the rate of \$356 billion at present, and growing, many more jobs, with higher salaries, will need to be provided in order to effect distribution on the basis of price. It becomes apparent that the econ-

omy must expand or slide back. It cannot stand still.

This in no way should be construed to mean that we think the Democrats with the New Deal spending were on the right track. That was just another exit to bankruptcy. The national debt has become a major problem to the politicians with no means in sight for paying it off. The limit to which we can go in debt is tied to our ability to pay taxes to service that debt. One political administration thought that we could borrow ourselves into prosperity, while the other thinks we can economize ourselves into prosperity. The rules of the game have changed. We can't play it either way any more.

Did you ever try to sell your neighbor a bag of air? Why couldn't you? He had all he needed and there was more than enough for the taking. The implication, then, is clear. You cannot sell abundance. You cannot even give it away in a world that uses trade in commodities as a means of distributing its scarce items. The appalling evidence that our present method of distribution cannot cope with abundance grows ever clearer. An analysis of the problem brings to light the indisputable impact that technology has had on our way of life. Automation of factories has become a necessity in order for firms to stay in business, otherwise they might lose the market to their competitors. The distribution of

goods and services, depending on the purchasing power (wages and salaries) of a large per cent of the population, becomes an ever greater problem when automation of factories reduces the number of jobs available.

Make-work programs must be, and are being, used in order to get purchasing power into the hands of the consumer. The WPA job of 1954 can no longer be symbolized by the shovel that went with it in the thirties; today it has to be more dignified because of the high salary it pays. We are forced to consume and consume well, and ways and means must be instigated to assure that we do. If we do not consume the growing North American production it may smother us all. You may say, then, let us stop producing. Within a matter of weeks twenty million or more unemployed people would be without income for food. Hungry men, with starving families, in the richest country on earth could become very, very nasty. It would be far safer to be one of them than to have a job.

Problem With No Solution

The problem, then, seems to defy solution. This is true insofar as political solutions are concerned. There is no solution within the framework of the status quo. Let us then take a look at another concept; the concept of technological control.

Technocracy, government by skill, offers an idea far beyond the reforms and the palliatives of the politicians; an idea so completely different and yet so simple that anyone can grasp it. It is not a matter of discovering new methods or groping by trial and error through a new theory because the 'know how' to solve the problem is already available. The method is simply to apply science to the method of distribution. An outline of that method has been obtainable from Technocracy for the past twenty-three years. Different parts of this method are already being used in industry today. Within a very short time it will become apparent to you and other North Americans that you have no choice — you must adapt to your environment or cease to exist. Installing a method of distributing goods and services is part of that adapting.

You cannot escape. You will have to accept abundance. Avoid uncertainty, join Technocracy and watch the events unfold with a knowledge of where you are going and why. Intelligent action on your part can help pave a broad highway to the New America.

—Ruth M. Berge, 12247-3



Part of cheese stocks purchased by the Commodity Credit Corporation under the price support program.
(Photo courtesy of USDA)

Juvenile Victims

Grandfather's concepts can produce no guide to the young generation of this new age. His thought patterns belong to an age that is gone. Entirely new concepts and patterns are required for the youth of today.

SURPRISING results sometimes occur when a little scientific investigation is applied to commonly accepted 'facts' and preconceived notions. The complacency of a good many Americans undoubtedly has been disturbed by recent disclosures of the findings of a study sponsored by the New York University-Bellevue Medical Center. As reported by the U. S. News and World Report (March 19, 1954), this was an investigation into the probable extent of muscular weaknesses among the nation's children. Beginning in 1951, research teams tested groups of children in public schools in a number of suburban and medium-sized communities in Northeastern U. S. Identical tests were given by the same researchers to groups of Italian and Austrian children, in comparable communities in those countries.

The tests consisted of a series of exercises that showed the elasticity and power of each child's back, upper leg, and abdominal muscles. To test lower abdominal muscles, for example, the child was asked to lie flat on the floor, raise both legs to a thirty-degree angle and hold them there for ten seconds while keeping the knees straight. This test, and five other test movements, were given to 4,458 American children, and also to 1,987 Italian and Austrian children. All were normal, healthy individuals, representing a cross section of each school unit participating.

This series of test movements, the article stated, is the same that doctors give to muscularly deficient back-ache sufferers. Inability to pass all the tests is considered by medical men to mean that the child is below the minimum standard of muscular fitness required for good health. **In the U. S. communities, 56.6 per cent of the children failed to pass one or more of the tests. In the European group only 8 per cent failed.** That is more than one in two American children and only one in twelve Europeans.

No significant difference was found between muscular weaknesses in children from well-to-do homes and of those from poor homes. Children

from fairly rich suburban communities were found to have just as many weaknesses as those from very poor sections of cities.

Also quoted in the report was a related comment from another angle, that of our public schools. Vaughn Blanchard, divisional director of health and education in the Detroit Public Schools, made these points:

'Certainly the boys and girls of today are bigger and healthier than the children of thirty years ago. But we have found marked weaknesses of shoulder muscles. So we introduced rope-climbing exercises in our elementary schools. And we require physical education courses for every student from the fifth grade through high school. But it's for only one 40 to 60-minute period a day, and that's not nearly enough. Yet when the children go home, their chance of getting any more healthful exercise is very limited, even if they are willing to make an effort to do something.'

The researchers found that children coming into the first grade already are seriously deficient in muscle; while they are in elementary schools little or nothing is done to alleviate their muscular defects and they leave the grade schools in much the same condition as they entered, or slightly worse. **'At no age level do American children approach European children in muscular flexibility and strength,'** it was stated. The U. S. News and World report concludes:

'Chances are that you'll be hearing a lot more in years ahead, about the growing evidence that wealthy, mechanized U. S. may be pampering its children too much, giving them everything they need for their physical well-being except the chance to grow in strength and dexterity.'

The implication is that this is merely a matter of pampering our children because we are all too wealthy. Nothing is said of the effects of possible malnutrition among both rich and poor due partly to our highly-commercialized foods and diets; and

no suggestion is made as to any means of either alleviating or curing the situation. Neither is there any recognition of the fact that the conditions which have brought this about are due to certain fundamental changes in our social structure—changes which can never be any better but can only grow worse as long as our present methods of social operation continue in effect.

Recreation Needed

In analyzing the problem, one encounters a good many ifs, conditions and angles which are not even hinted at in the author's conclusion. If all Americans were wealthy, and if TV were a fact of long standing instead of merely one of the newest of gadgets, then the suggestion that half of our school children had been pampered into a state of general weakness by such indulgences might have some validity. However, most significant is Mr. Blanchard's statement that 'When the children go home, their chance of getting any more healthful exercise is very limited, even if they are willing to make an effort to do something.'

The American home today is no longer a place where all members of the family have to work together to keep the plant operating. In this country, all of the operations of daily living have been so simplified and mechanized that the actual expenditure of muscular energy is a minor matter, and the chief demand made on the average child is that he keep all of his many possessions put away so they will not clutter up the house. As a rule he is given more toys than he knows what to do with; but this is done in the effort to keep him occupied and because of the dearth of available outlets for his energy. It is not a matter of pampering, but simply one of sheer inconvenience to live physically active lives under present day conditions.

Participation Sports

Above a certain income level many children do have bicycles, but with today's traffic conditions bicycle riding is a hazardous proposition. Small children cannot be allowed any degree of freedom on the streets, and regulated playgrounds are all too few and in a great many cases too far from home. Most of our parks are show places rather than playgrounds. A few ball fields and tennis courts, yes; but there, as in grown-up and professional sports, the large majority are merely on-lookers. Below the bicycle level, and even there too, the life of the ordinary city, town, or suburban child is really a sadly restricted one. The old pat-

terns of activity are gone and no adequate effort is being made to provide satisfactory new patterns.

Farm Children Activities

The condition is only slightly different in rural areas, thanks to mechanized and specialized farming and to rapid transportation which makes it easier and more economical to go to town and buy supplies of all sorts than it is to produce them on the farm. This includes such basic things as bread, butter, meat, and even milk. Country boys, and girls too, may get to drive some of the farm machinery, but that is not much exercise, and it doesn't last long. In town and suburb there is practically no place in the family economy where the child's services are really needed. The child's position is almost entirely that of a consumer, of necessities and a limited range of amusements and recreations—restricted by reason of the prices attached. Witness, the prohibitive costs of bowling, skiing, boating, golf, etc. As for learning to swing an axe and cut wood, one of the most vigorous and tiring of the old-fashioned exercises—well, even a boy scout is 'lucky' if he has a chance at that for a week or two in the year.

Gone Are the Days

We of the older generations can look back to the early or pre-automobile days, when city streets were still safe and legitimate playgrounds; when such games as 'prisoners' base' and 'run sheep run' sometimes kept whole neighborhoods in an uproar, with children racing and tearing around after school was out. We could roller skate in the streets, and in winter it was even perfectly safe to go sledding on some hilly street right close to home. Today, such joys are unknown and the kids are doomed to stay shut in, unless some adult can spare the time and money to drive them to some distant point. This is always a matter of individual family means and initiative. As a rule it is much simpler to let the children go to a movie, or to provide a TV set to amuse the whole family at home. When high living costs compel mothers to go out to work, they find it almost imperative to provide TV in order to keep their children at home at all. It is something of a question whether this constitutes pampering the children or pampering dad and mom. However, we recognize that a 'return' to the hard work and 'healthy exercise' of grandfather's day is no answer, even if it were practicable. Grandfather's concepts can provide no guide to the young generation of this new age. His thought patterns belong

to an age that is gone. Entirely new concepts and new patterns are required for the youth of today.

A glance at the accompanying chart showing American family incomes will soon explode the 'pampering' theory. This is not a recent chart, but while today's range of figures would run somewhat higher, with an increase in living costs nearly proportional, the general picture undoubtedly would remain the same. Nearly half of all American families are still living below what might well be called the 'TV level.' True, they do have many things that people in other countries cannot hope to own today; but the fact also remains that they do not have certain other things and services that they could enjoy—things and services which would be readily available if we but had the social organization to provide them.

Actually, TV is a cheap and easy substitute for the more vigorous kinds of recreation and activity our children should be having. A great many adults are soon bored by the inanities of many of the pro-

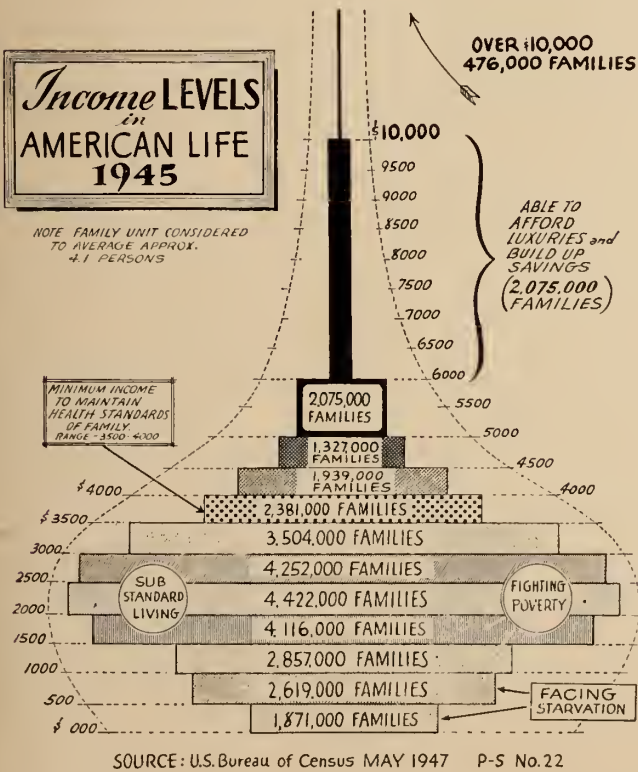
grams presented and the tiresome repetition of the commercials. We can't expect the children to be satisfied for long with this substitute for physical play. Incited or bored by the type of shows provided, it's really no wonder the more adventure-some among them go out for other kinds of excitement and in so doing become 'juvenile delinquents.' Juvenile delinquency is the direct outcome or rebellion against the patterns of the social order. The condition is bound to grow worse until the necessary steps are taken to establish a more rational and workable state of society, in which our children and our children's children can live normal, healthy, useful, and interesting lives. Since it is being forcefully demonstrated every day that price, in all its ramifications, constitutes the prime factor that interferes with the establishment of such a state, then it behooves us to redesign our social structure so as to eliminate that factor forthwith.

In a Technocratic society the welfare of our youth would be a matter of primary collective importance. With all price interference removed, the youth would be provided full opportunity to develop in health, knowledge, and general social usefulness, to the full extent of their inherent capacity. Each child not only would have the benefit of the highest type of home life his parents could develop with unrestricted means, but together with all other children would enjoy all those benefits which can be achieved only by the combined efforts and application of a trained organization. Ample play areas and gymnasiums would be developed and made readily available to all of the children under safe and adequate controls. No form of sport would ever be 'too expensive' for any child or family.

Developing Aptitudes

Instead of being a victim of a predatory society each child would have all the education he could absorb. Each would be given special aptitude tests to determine his abilities and training to fit him not only to live a healthful and enjoyable life but to function to his highest capacity in the vocational field of his own choice. And when he had reached that stage of development, at about 25 years of age, he could step right into the line of production or social service for which he had prepared himself, without all the frustrations now endured by the average young person trying to find and keep a toehold in the economic setup.

The physical fitness report quoted above states that top military, medical and school officials are disturbed by the conditions described. These find-



These figures have changed somewhat, but the total picture remains very much the same today as it did when this chart was drawn up.

ings serve to corroborate the experiences of draft officials, to whom, it is stated, 'It's a vital question whether the U. S. can afford to risk any further increase in physical defects among the group it must depend on for future fighters, when manpower resources already are small compared with the masses available to Russia and China.'

In the Technate of North America without Price System incentives for promoting wars around the world and without military demand supplying the prime motive for physical training society's concern will be to produce, not the finest kind of mass cannon fodder, but the highest type of citizens as well as fit fathers and mothers for future generations of North Americans.

Speed the day!

—Lucy L. Barnes, 12247-3

CONTENTS

No. 177 (Vol. XVIII)	October, 1954
	Page
You Never Can Tell	2
The Shock of Indecision	3
High Ball	7
Developing Trends	14
Have You Observed?	16
What Does the Future Hold for America?	17
Get a Load of This	20
Juvenile Victims	23

Editorial Board.....George Kellogg,
Harry Briggs, Ruth Berge
Business Manager.....Rina Corcoran
Circulation Manager.....Lucy L. Barnes

Printed in U.S.A. by volunteer and union
labor on Technocracy's own press.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or association either in America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section. Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses, or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' 'that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every province in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the nearest Technocracy unit.

WHO?

Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—so long as you are a patriotic American—you are welcome in Technocracy.

TECHNOCRACY PAMPHLETS

Introduction to Technocracy	25c
America Must Show the Way	15c
Our Country Right or Wrong	15c
Continentalism—The Mandate of Survival	15c
Make Way for Social Change	15c
I Am the Price System, and The Culture of Abundance	15c
Man-Hours and Distribution	15c
The Energy Certificate	10c
Science versus Chaos	10c

RAIL PROFITS DROP

Class I rail earnings for the first six months were off 46 per cent from the 1953 period, according to the Association of American Railroads. This year's net after all charges was \$224 million, compared with \$418 million. For June alone, the drop was less steep; the roads netted \$59 million in the month, 26 per cent less than the year before.

—Business Week

FUTURE HOLDS

(Continued from Page 19)

advertising, banking, insurance, duplication of service and crime. Study the information concerning the location and types of the world's natural resources and population. One can only conclude that North America is the Continent which is physically able to install an economy of abundance NOW.

The future holds either chaos or an economy of abundance for all Americans. Which side are you on? Are you willing to inform yourself concerning Technocracy's scientific analysis of the Price System and its design for an economy of abundance for all North Americans? If you ever have that economy of abundance you will have to study Technocracy, because it is the only Organization that is working for abundance for all Americans. All other Organizations are working to maintain scarcity and this is leading to chaos. If you are not willing to assist with the installation of an economy of abundance for Americans, the least you can do is to stay out of the way, because any interference is virtual treason against all Americans including yourself. If you are willing to assist in the installa-

tion of an economy of abundance on this Continent, your first step is to inform yourself concerning the verifiable facts which Technocracy presents so that you will KNOW what to do, what can be done and how to do it.

Join Technocracy and attend Study Classes, study at home and be ready to assist other Americans in learning how to prevent chaos on this Continent. Assist them to understand that Technocracy holds the only design which has yet been found which is capable of the distribution of Abundance.

—L. W. Nicholson, 8234-A

SUBSCRIPTION ORDER

To: The NORTHWEST TECHNOCRAT
2208 8th Ave.
Seattle 1, Wash.

Enclosed herewith is \$.....to cover subscrip-
tion(s) to Technocracy's Magazines (rates listed as
follows):

- ☐ All Three Magazines, 12 months, 12 issues,
\$3.00. (All three publications *rotated*).
- ☐ THE NORTHWEST TECHNOCRAT, 4
issues, \$1.00; 12 issues, \$3.00. (Quarterly).
- ☐ THE TECHNOCRAT, 4 issues, \$1; 12 is-
sues, \$3.00. (Quarterly).
- ☐ TECHNOCRACY DIGEST, 4 issues, \$1; 12
issues, \$3.00. (Quarterly).
- ☐ This is a *new* subscription.
- ☐ This is a *renewal* subscription.

(Canadian orders payable in U. S. funds)

START WITH.....ISSUE

Name.....

Address.....

City..... Zone..... State.....

(or) City..... Province.....

(Foreign rates, other than Canada, Mexico, and U. S.
territories, 20% (50c) additional to above rates.)



OUR OWN BACKYARD

The problem of United States and the Continent of North America is here and now on this Continent of North America. It is here in our own back yard, not 12,000 miles around the globe. United States is a world power but how long will she continue to be a world power if she sacrifices and squanders the national heritage of her resources in capturing the international profits of American private business around the world, while she sabotages the common good and the general welfare of 200 million North Americans at home?

THE NORTHWEST

Technocrat

JAN '55

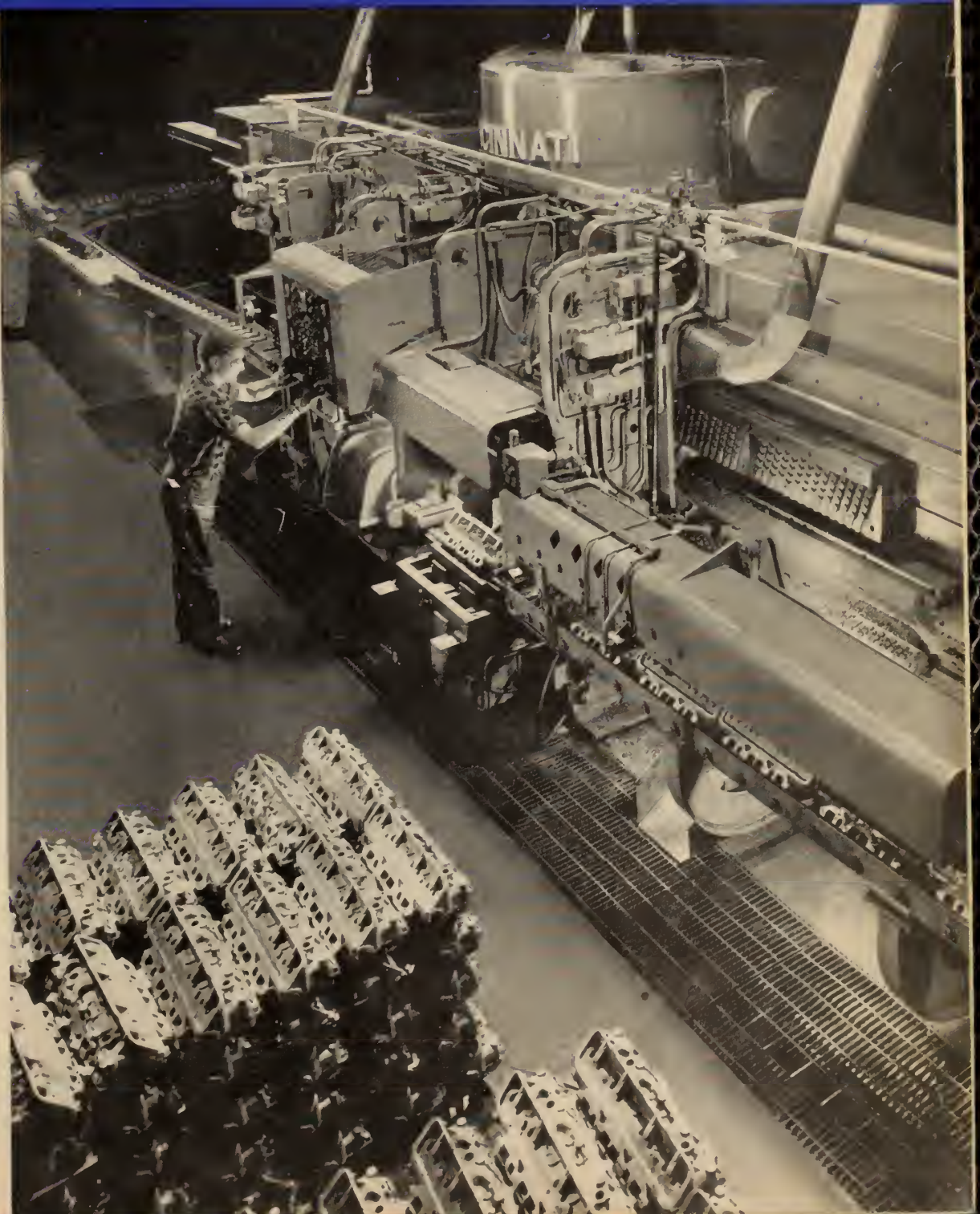
IN THIS ISSUE:

- Science Is Non-Patriotic
- Stone Axe to Automation
- The Paradox of Survival
- Polyethylene
- Environment and the Way of Life

No. 178 (Vol. XIX)

25¢

Sec. 3. R. D. 12247
TECHNOCRACY INC.
Seattle, Washington





Why It Can't Last

SOMETIMES when circumstances suit our taste we have a tendency to close our eyes to avert seeing the basic issues. Not having a firm basic knowledge of how an economy operates tends to make people lean toward those who present an optimistic outlook about the Price System. Then, when one points out to them that certain basic phenomena occur in a deteriorating body, it frightens them. Let us consider some basic economics and see where we, as a nation, are headed. From Trend-events of Feb., 1952, a Technocracy publication, we quote the following important material on Why the Price System Can't Last:

'The Free Enterprise system of Business depends for prosperity upon an ever-expanding economy; that is, the expansion of one year must be sufficient to take up the discrepancy between the national product and the national purchasing power of the previous year. If a combination of expanding geographical domain, increasing population, and new products is sufficient to ensure a gross annual increase in the economy of seven per cent, Business remains in a healthy condition. Any lesser rate of expansion results in Business panics, recessions, and depressions. Favorable conditions of expansion in the American economy have not existed during the past forty years; but, for brief periods during that time, a semblance of business prosperity has been achieved by government "interference" in the operations of the economy. World Wars I and II, for example, permitted the government to create enough debt and to absorb enough of the production to provide temporary conditions of Business prosperity. Abnormal industrial expansion during the 1920's and the late 1940's, plus expanding consumer debt (credit), gave business a feeling of exhilaration that had a superficial resemblance to normal health.

'During the 1930's, government "interference" in the form of billions of dollars, of "pump priming," through new debt creation, saved the life of "Free Enterprise"; and, again, further interference in the

form of the Police Action in Korea and large-scale preparations for World War III have kept "prosperity" going since 1950. But the task of covering the discrepancy between gross national product and national income by stimulating industrial expansion, taxation, and debt creation, is becoming an impossible proposition. Under Free Enterprise, the economy has to expand at a geometric ratio, and nothing can continue for long on that basis, not even Free Enterprise. Take taxation, for example: The administration of Harry S. Truman had to levy more taxes than all previous administrations combined, including Franklin D. Roosevelt's. The next administration must do even "better."

'Even a gambler at the race track knows enough to quite betting on a horse after it has passed its youth. It is high time that North Americans quit betting on the decrepit Free Enterprise system—or any phase of the Price System for that matter—and started Playing America to Win with Technocracy—a system of economy based on balanced-load operations and not on a geometrical expansion.'

COVER PICTURE

BROACHING V-8 ENGINE HEADS

This giant broach is 45 feet long and weighs more than 75 tons, yet it operates entirely by push-button, automatically machining the three sides of a cylinder head to the required tolerances. Grid running along the front of machine is for scrap which drops onto underground conveyor leading to storage bins in another part of the plant. See 'Stone Axe to Automation' on page 9.

—Photo Courtesy of Buick Motor Division

JANUARY 1955

THE NORTHWEST Technocrat

SCIENCE IS NON-PATRIOTIC

Science is indifferent to gods, devils, and morals. Also, it is indifferent to political and economic ideologies, skin color, and shapes of physiognomy. But, due to the propagandists of the Old Order, all is either Good or Evil, and the rewards should go to the Good Ones and the curses should go to the Evil Ones.

AMERICA'S propaganda artists have tended to consider science as an American monopoly, with Germany, France, Britain, and possibly Japan participating as junior partners. The idea that science should be taken up in other geographical areas, such as South America, Africa, Asia, eastern Europe, and the archipelagos, was considered too ridiculous to contemplate. The people of those areas had no 'right' to be anything different than they had been for centuries. Their primary function should be to serve as quaint native background for American tourists, forever showing wide-eyed amazement and uttering 'Oh My's' as they were shown the wonders of the Civilized World. Secondly, they should serve as ignorant, obedient, and cheap unskilled labor for private exploitive enterprise; and, thirdly, they should become grateful customers for cheap gadgets and bangles offered for sale by American business.

But the 'natives' of the 'backward' areas are not being properly impressed with the roles that American enterprise would have them play. And, long ago, they have overcome that childish display of astonishment at the 'magic' of the West which they were expected to exhibit in perpetuity. They have learned that there is nothing magic, or divine, or even remarkable in the accomplishments of the White Ones. They believe that with similar education and facilities they could do as well themselves, and probably better. They recognize that the White Ones are dangerous and devilishly destructive, as well as

supremely conceited, but not invincible. Our strength lies in our science; but anyone can use science and acquire similar strength.

Science and technology are devoted to no race, or nation, or creed. They can be administered with equal success by any people who have the knowledge and training to utilize them. In other words, science and technology have no God, no country, no devotion to a master race, and no morals.

Medical science administered to an ailing pope is just as effective in kind and degree as if administered to an ailing hottentot. A machine gun in the hands of a crazed maniac on a downtown street will respond with the same deadly effect as one in the hands of a patriotic young soldier fighting 'for God and Country' (and Standard Oil). During World War II, the 'lowly Jap simians' demonstrated that they could understand and employ science just as well as could the most supreme and wise 'nordics.' Later, the gooks of Korea and the hill tribes of Indo-China learned that they could meet and frustrate the fiercest display of arms ever unleashed by the White Ones.

The 'backward' people are no longer impressed with our gadgets and hypocritical phrases. They know that soon they too will become the masters of science and technology; and the East will be equal to the West. Science will completely and forever destroy that barrier between East and West that the social arts could never breach.

In the light of the world-wide quest for knowl-

edge and know-how, one must reject as silly and inept the commentaries that go with travelogue movies. For example, the pleadings of the Lowells Thomas, father and son, that the culture of Tibet be perpetuated in ignorance, superstition, poverty, and human toil; that it forever be characterized by poor communications, petty banditry, supernumerary ecclesiastics, and an appalling oppression of the many by the few. Their recent film and commentary on Tibet—a la State Department and National Geographic Magazine—represents a dying gasp of a dying age. Lamaistic fascism, like all other fascisms, has only one kind of future—none. Science and technology imply a way of life that is the antithesis of fascism; and, although science, as such, is neither loyal nor disloyal to fascism, it compels a way of life that undermines the social props of that barbarian climax culture.

Science Is Indifferent

There has been a splash of articles in the American press of recent months on the subject of scientific training in Russia. These articles display alarm and amazement over the fact that Russia is graduating more than double as many scientists, engineers, and technicians as the United States and that, on the whole, their qualifications are equal to and probably superior to those of our graduates. There appears to be an underlying tone of resentment in these articles over THOSE people's proving that they are our technological equals. Since God is supposed to be on Our Side, the only logical interpretation of the situation is that the Devil is waging some successful competition. Actually, as we have indicated above, science is indifferent to gods, devils, and morals. Also, it is indifferent to political and economic ideologies, skin color, and shapes of physiognomy. But, due to the propagandists of the Old Order, all is either Good or Evil, and the rewards should go to the Good Ones and the curses should go to the Evil Ones.

There is nothing unique about a scientist, engineer, or technician that should limit him to any particular race, country, or dogma. Among others, the Negroes and Arabs of Africa show surprising capability when given the opportunity to learn the procedures of science; and Bulgaria (of all places!) is becoming successfully industrialized. The Master Race propaganda of the West has long stressed the 'fact' that the people of the backward areas were too dumb, too ignorant, and too indifferent to ever become fully civilized. But time has proven that

such expressions were more in the nature of a hope than verified fact. According to the 'analyses' of our propagandists, it is inconceivable that the 'lowest' of all caucasoid people—the Russian peasants—should be able to build aeroplanes and tanks of a superior design, that they should be able to construct some of the best submarines and hydroelectric plants in the world, that they should be able to develop atomic and hydrogen bombs. The only explanation they can offer is the assumption that the Russians must have captured and enslaved some German scientists and stolen some American 'secrets.'

The Scientific Method is nobody's secret; and it will produce similar results wherever applied. The Russians are just as capable of using the Scientific Method as the Americans (or Germans). The advancement of science and technology does not have to await the manifestation of Miracles or the bestowal of Divine Revelations. The knowledge and applications of science are not frozen in the patterns of sermons and laments uttered two thousand or more years ago. Given the personnel and research, science can open the way for technological applications at a rapid pace—whether the personnel and effort are of Russian, Chinese, American, or any other origin. With similar effort, the Americans could produce results equivalent to those of the Russians.

No Secrets

All the hate-propaganda worked up over the 'secrets' of the atomic and hydrogen bombs is so much pure fog. There are no secrets worth mentioning and there are no magic formulae (that is, outside of Hollywood cinemas and transcripts of Inquisitional testimony). The scientists of any major nation (and several smaller nations) have all the knowledge they need to produce the Super Bombs, given the technological capacity, the energy, and the materials. They do not need the services of 'German scientists' or American 'secrets' in the form of mystical mathematical scrawls to guide them. It is obvious to anyone who knows anything about science, particularly nuclear physics, that the imprisonments of Klaus Fuchs, David Greenglass, and Alger Hiss, as well as the execution of the Rosenbergs, were for politico-ecclesiastical propaganda purposes rather than for any 'secrets' they might have dispensed with respect to the atomic bomb.

The so-called 'stroke of genius' that made the Hydrogen Bomb a success for America was a nor-

mal outcome of applied research on the problem. With so much attention being devoted to the project, someone was bound to come up with the same or a similar theory. The success of the Russian Hydrogen Bomb proved that such inspirational thoughts can happen to others, also, and are not the rare gift solely of an expatriate Hungarian.

The Scientific Attitude

The human brain is capable of great ingenuity and achievement, given an attitude of progress and a problem to solve. The Scientific Attitude is one of progress, as well as a mental discipline that facilitates the achievement of progress. The scientist is confident that any problem confronting mankind can be overcome, given the time, the physical facilities, and the personnel to work on it. A cure for cancer, for example, no doubt could be found soon if a major scientific effort were directed toward that end. (However, do not look for a cure for cancer to come from the American Cancer Society, the Damon Runyon Fund, some renowned cancer clinic, or any other institution financially interested in the perpetuation of cancer.)

Sometimes the key knowledge for a specific development in science comes 'accidentally' from an entirely unrelated field of research. For example, casual research on the life-history and physiology of mosquitoes once led to the eradication of yellow fever. The research on atomic bombs has produced side-effects in the form of numerous radioactive isotopes, some of which can be used for tracing the physiological processes in plants and animals. Such tracer elements may serve, among other things, to expedite the discovery of a cure for cancer.

But the discovery of the facts involved in the solution of the cancer problem does not have to happen in America. It may happen (the Virgin Mary forbid!) in Russia, or China, or some other 'unexpected' place. It will most probably happen where the most scientific research effort is applied to the problem. At present, the Russians are ahead of anyone else in the volume of clinical application of cancer technology and the social organization for it, and they may be ahead in the volume of fundamental research. The Americans probably lead the world in the number of unsuccessful operations at a price.

A very good explanation for the supremacy of Russia in the quantity and quality of graduates in science, technology, and engineering is to be found in those fields of education and training. In the Soviet Union, an educator, a scientist, or an engineer

MY TWO CENTS WORTH

I see where Mr. McCarthy pulled off another fast one with his elbow. He said it was full of glass splinters and had to be operated on, but that turned out to be a lie, like most of the things he says. After the war he claimed his leg was full of shrapnel, but it turned out he only fell off a ladder while drunk. If they can get witnesses to lie about communists all the time, I guess they can get some doctors to lie about Mr. McCarthy's elbow, even if they won't tell as big a whopper as he does.

What bothers me about Mr. McCarthy is all the people who think he is wonderful. Of course, they are mostly Roman-Americans like he is, but you would think they'd have more respect for the truth than that, anyway. Mr. McCarthy says he is a good Christian, but that must be another one of his big lies, or else I am all mixed up about what a good Christian should be.

I asked Uncle Zeke what he thought of Mr. McCarthy and his carrying ons, and he just snorted. He says McCarthy ain't nobody but a puppet stuck up there to scare us by some wicked people who want to take over our country and make it into a dictatorship like they have in Spain and other places. I don't know about that, but it does seem like Mr. McCarthy gets a lot of help from a lot of important people, and I don't like it.

Maybe us Americans don't run our country like we ought to, but we don't need any bullies and liars like McCarthy and his bosses to tell us how to run it, either.

— IMA MORON

can attain a degree of social recognition and personal income that, in America, is reserved only for the businessman and politicians. Further, in America, there is a widespread resentment, suspicion, and contempt in influential circles for science and the 'atheistic materialism' it 'represents.' At this time, there is no social inducement here for a young person to go into a study of science as a career. If the young scientist does not become a captive subject of some private enterprise corporation (to devise shoddiness and obsolescence in commercial products as often as to seek improvements and new

techniques), he is subject to Civil Service investigations, loyalty oaths, and Inquisitional questioning regarding his philosophical concepts. The independent researcher or student has few opportunities to obtain the funds, facilities, time, and social tranquility to carry on his work. Among other things, he is subject to suspicious interference from the Guardians of the status quo, to malicious gossiping among the neighbors, and to destructive sabotage by hoodlum elements.

The young generation of Americans can never learn respect for science or become interested in scientific research from its present major sources of 'information'—Hollywood movies, television, and comic books. According to these 'sources,' the scientist is some sort of queer duck who spends much of his time in a secluded den filled with complicated glassware, and who makes unintelligible scribbles in a notebook; and eventually (Voila! Eureka!, or what say you?), comes up with an amazing discovery of some fictional fantasy, around and through which is spun a story of romance, murder, and intrigue.

Intellectual Discipline

But, in life, the scientist is not a unique or odd personality. Almost anyone of normal or superior intelligence can work at science quite successfully if he can adapt to the intellectual discipline of the Scientific Attitude, in at least one field of knowledge. The scientific 'genius' rating is a rare phenomenon; and, even so, many of those who achieve the 'genius' rating have done so through the pirating of material from vocational subordinates and others, then publishing it as their own. Most discoveries in science come as incidental products of general experimental surveys and routine checking; not as premeditations. The inductions and deductions based on observations which serve as the framework of theories, and as guides to their verification, sometimes are 'inspirational' or seemingly so; for example, the theory of evolution through natural selection or the theory of the indestructibility of matter. But such fundamental inductions are not to be expected from every scientist nor from scientists as a whole very often. And they usually come only after long years of concentration on the subject, seldom as sudden strokes of brilliance. The great bulk of the time and effort in science is spent on the 'pick and shovel' work of gathering, checking, and measuring quantities and qualities of things.

In astronomy, a major part of the work consists

of mapping the skies photographically, then periodically taking new photographs of the same areas and checking them with the previous photographs and noting the changes.

In chemistry, much of the work consists of purifying and analyzing materials and checking their properties; breaking down chemical compounds and synthesizing new ones; and blending substances into mixtures with special properties.

Perspiration Rather Than Inspiration

The physicist observes and experiments with energy in its various forms, with its manifestations and transformations, much of it involving tedious and highly precise measurements. For example, the trials and techniques used for measuring the speed of light have been numerous and ingenious; but they have involved more perspiration than inspiration. The recent emphasis in physics is on the study of energy embodied within the atoms. The Hydrogen Bomb explosions, of which there have been a dozen or so to date, are the dramatic results of over a half century's accumulation of study and experiment in that field.

In geology, the bulk of the work consists of accumulating data on rock formations, as to structure, extent, composition, conformities, unconformities, and fossil content. From compilations of such data is determined the geological age of the rocks, the geological history back of them, and their probable relation of metal, mineral, oil, and coal deposits. The surveying of the rocks near the earth's surface for oil deposits, for example, involves much routine 'leg work,' and only rarely a 'stroke of genius.'

Work To Do

The lines of research and the quantity of knowledge to be investigated in the field of biology undoubtedly surpasses that of any other comparable field in variety and complexity. Merely one phase of biology—collecting, classifying, and describing the two million or more different kinds of plants and animals on the earth—is enough to keep numerous biologists and technicians active for many decades; and there are eight or more other phases of biology that involve as much if not more time and effort to work out.

Let us state for the benefit of those who are alarmed over the possibility that automatic technology will dry up the fields of human endeavor, there is an insatiable opportunity for productive employment of millions of people in the fields of sci-

ence. There is enough work in sight to tax the technological facilities, the educational institutions, and the personnel of the Great Powers (to say nothing of the Lesser Powers) for many years to come.

Science is the only institution of man that has enabled the human species to materially improve its lot here on earth. It is the only institution that can guarantee that man will remain the dominant species on the earth forever. (We shall make no predictions regarding man's dominance over other planets, even those of the Solar System.) What man has accomplished to date in science is only a beginning compared to what lies ahead. But, if the knowledge and use of science is to remain under the domination of the Witch Doctors of politics, business, and ecclesiasticism, there may be no future for man at all. We are betting on science, of course, but the job of restraining and incapacitating the maniacs is not a simple one, nor is it yet assured of success.

Science In Human Affairs

The science of Human Affairs is still in its infancy and is not yet organized for productive endeavor on a large scale. The Witch Doctors still dominate Human Affairs. They have only one sure answer for a major problem—force of arms. They are partisan, dogmatic, and stubbornly recalcitrant. Science approaches a problem from an entirely different direction and is willing to follow it wherever it may lead, regardless of anyone's hopes, fears, or partisanship. The scientists never advocate seeking an answer to a social problem through the wholesale slaughter of people, such as the Witch Doctors appear always to be doing. The slaughtering of people does not solve the issues of a problem; at best, it merely postpones the occasion when a solution becomes mandatory. For example, the wholesale atom-bombing of China (which some of our leading Witch Doctors openly advocate) might postpone the Number One population problem of China, but it would not be a genuine solution to the problem of over-population, even if it were instituted for that purpose.

If an area is regulated by politics, if its economic system is based on exchange in terms of price, if it seeks to explain natural phenomenon in terms of miracles, you can be sure its Human Affairs are not being handled on a scientific basis; it is still in the clutches of the Witch Doctors. There is nothing scientific about politics, about Price System economics, about superstitious ritualism. No nation or

state on the earth today applies science to its Human Affairs, except to some of the details at the outermost fringes and to one or two deeper intrusions. The greatest inroad of applied science is in the field of production technique. Although the management of productive functions is still under the control of Witch Doctors, the actual techniques of production are tending to utilize science and technology to an encouraging degree. Science, to a lesser extent, has been applied to the function of health, but mostly on an individual piecemeal basis. Even so, the results have been amazing. But to the problems of distribution, social relations, governance, and peace, science is still a stranger.

Barbarians Will Fade Away

Let the barbarians of the world beware of that nation or area which first applies science to its Human Affairs, for their days—throughout the world—will be numbered in small figures. Science has no respect for anyone's barbarism in any of its facets. As technology creates contempt for human toil, so science will create a general contempt for all the other facets of barbarism; and the barbarisms of the world—of Moscow, of Rome, of Mecca, of Tel Aviv, of London, of Washington, of Tokyo, of Peking, of Lhasa, and all the others—will fade away.

While science is the only truly international institution yet developed by man, and while it has no regard for political boundaries or political ideologies, there must remain for some time geographical differences in the mode and extent of its application to social affairs. Not all areas of the earth are equally supplied with minerals, energy resources, soil and vegetation; and there are wide differences in race, culture, and applied technology. The application of science to social affairs must begin in one or a few places ahead of the others and develop as Area units, not as one simultaneous worldwide movement. The most likely place for the first development is the North American Continent; and the next most likely place is the Soviet Union. Europe trails far behind in third place.

The societies of the earth are presently organized on the barbarian pattern and only a major force can effect a break-through. That force, on the North American Continent, exists now in the form of a potential abundance of consumer goods and services. Abundance is steadily and surely disintegrating the values and foundations of the Price System. Without scarcity, there can be no politics, no business, no charity, no second class citizens, and no

prices. The only cure for the ills of a society brought on by a disintegrating Price System is the application of science to the social order, which is Technocracy.

Three Conspiratorial Movements

There occur in the world at present three different conspiratorial movements to take over the world and dominate it in the interest of some aspect of the Old Order. These are: Roman Catholic fascism, centered in Rome (and Washington); Bolshevik Communism, centered in Moscow; and American Business Enterprise, centered in Wall Street. All of these conspiracies are similar in their general aims and methods, although the resultants of their respective successes would be measurably different. The first and third of these are closely intertwined at present and are operating as allies in competition with the second in a world struggle which has become known as the Cold War. But the three are much closer in their affinities and characteristics than any of them are to Technocracy. In their struggle for supremacy, the three great conspiracies are calling upon science to furnish them with the sinews of social strength and the weapons of war. It is this dependence on science which is leading to the eventual defeat and dissolution of all three—unless, it so happens that, in their struggle for supremacy, one or both factions succeed in destroying the earth or all human life upon it, in which case the conspirators, along with everyone else, will be cremated together.

Technocracy anticipates the eventual changeover to a new social order based on science. The time for this changeover is imminent for North America. Accordingly, Technocracy has prepared the preliminary outline of operating specifications for such a social order on this Continent. For many years, the members of Technocracy have been presenting this program to the people of North America for their study and adoption. Because of the foresight, organizing genius, and persistent effort against great odds of Howard Scott, Director-in-Chief of Technocracy, an operating design is ready now for quick adoption by the people of this Area.

Transitional Device

There are many who have some casual acquaintance with Technocracy's program who voice concern or doubt about a feasible and effective transition from the Price System to Technocracy. But that is not the major problem, as Technocrats see it. Once there is an effective will among the people

of this Continent for a change, a transitional device will be ready—one which will be tailor-made to the circumstances at the time. You can be sure of one thing, it will not involve the mass slaughtering of human beings—which seems to be the favorite technique of the Old Order (note the historic invasions of Europe from Asia; the Mohammedan conquests; the Crusades; the Inquisition; the Hundred and Thirty Years Wars; the race purification program of fascist Germany; the Soviet purges; World Wars I and II, and proposed World War III). Professed piety is no guarantee of humanitarianism; rather, it is more likely to be a cloak for concealing genocidal intentions.

Science applied to Human Affairs certainly will be fully as effective and beneficial to mankind as has been the application of science to the other five major fields—chemistry, physics, astronomy, geology, and biology. The institution of science in these other fields has been fought most bitterly by the Guardians of the Old Order; but the resentment against the application of science to Human Affairs is, and will be, the bitterest of all. However, there is no doubt that science will be successful, as always. Our own North America most probably will be the first place where science will be applied to society.

Technocracy Is Ready

Technocracy is ready anytime that enough people of this Area are ready to make it a reality. Much is to be lost and nothing gained through delay, and there is the ever constant danger of disaster through social chaos or atomic annihilation.

North America has no monopoly on science and technology, but it does (for the present) have the advantage of a head start. We can make the most of this advantage by quickly installing the Technate, or we can boondoggle with the Cold War and lose the advantage by default. The Holy Alliance of American politics, American business enterprise, and the Roman Catholic hierarchy, because of their internal characteristics, cannot for long compete successfully with the greater organizational efficiency and higher regard for science and technology of the Other Side. The only way to ensure supremacy for the immediate future, as well as to ensure society for the long term, is for North Americans to quickly apply science to their social affairs and become an unsurpassable example for the whole world.

—Wilton Ivie, CHQ

STONE-AXE TO AUTOMATION

THE FIRST PROGRESS toward implements for better living by man began when the first sharp stone was tied to a stick and the tool thus devised was used to gain an advantage in the quest for food. The age of the hand tool had begun. This age has lasted for many thousands of years and still prevails in almost all parts of the world yet today. The discovery of fire, of metals and their uses, and the domestication of plants and animals were all accompanied, of necessity, with a larger use of hand tools. A new era was entered in this unidirectional progression toward bigger and better tools when man began to make use of a new energy source, that of fossil fuel—coal and, later, oil.

Coal came to be used to such an extent in the smelting of iron ore, the manufacture of glass, the fabrication of tools, and for a source of domestic heating in England that by the 17th century the mines had become so deep and water seepage such a problem that it was necessary to devise some method to get rid of the water, if coal was to be mined at all. Hand tools were first used for this purpose, then small hand pumps and then treadmills with horses. The hundred-horse treadmill was soon required to keep up with the problem of the water. Feeding and caring for several hundred horses by the mine owner soon made it unprofitable to mine coal at all. The development of the steam engine was only a matter of time.

Hand Tools To Machine

With the invention of the steam engine by James Watt in the late 18th century began the first industrial revolution and the period when machines powered by extraneous energy began to lighten man's task of acquiring food, shelter, and clothing. Factories were built, and man, by use of the machine, produced in one ten-hour day many more units than he was able to produce by using hand tools. This was especially true in America where extraneous energy and natural resources were abundant and the climate was ideal. By this time electricity

had also been discovered and the kilowatt hour was being put to work 24 hours a day to help man raise his standard of living ever higher.

With the knowledge of the workings of electricity, the processing of new metals, and the development of plastics came the ability to build devices which could duplicate some of the processes of the human brain—the electronic 'brain'—which is in use quite widely on simple machine tending tasks, eliminating still further the use of human beings in the production process. Not only almost all vestiges of the hand tool have disappeared but machines are now causing even man himself to be unnecessary in some stages of the operation. Thus dawns the second industrial revolution and 'Automation' becomes the order of the day.

Machines Without Operators

The process of turning out a part for your automobile 25 years ago was accomplished by an operator in full command of the machine. He started the machining process; stopped when he determined that the dimensions were accurate. His skill was supreme. Today the machine turns out the part more accurately without any operator whatsoever. The machine itself is preset to decide when the correct dimensions are reached. Thus the skill now lies with the designer of the machine itself. To show the ultimate in one-product fabrication let us quote from an article in *Business Week*, September 4, 1954, 'Automation—It's Coming Everywhere':

'The trend (toward automation) shows up more dramatically in a new boring machine for stator housings for jet engines. Using 55 carbide tools, at about 600 hp., **this many-armed monster does at one clip for 90 cents what used to cost \$1,200, take hour after hour of finicky work. It condenses a 20-acre plant into 20 sq. ft. It costs half a million dollars—but replaces \$52 million worth of machines.**' (Emphasis ours, Ed.)

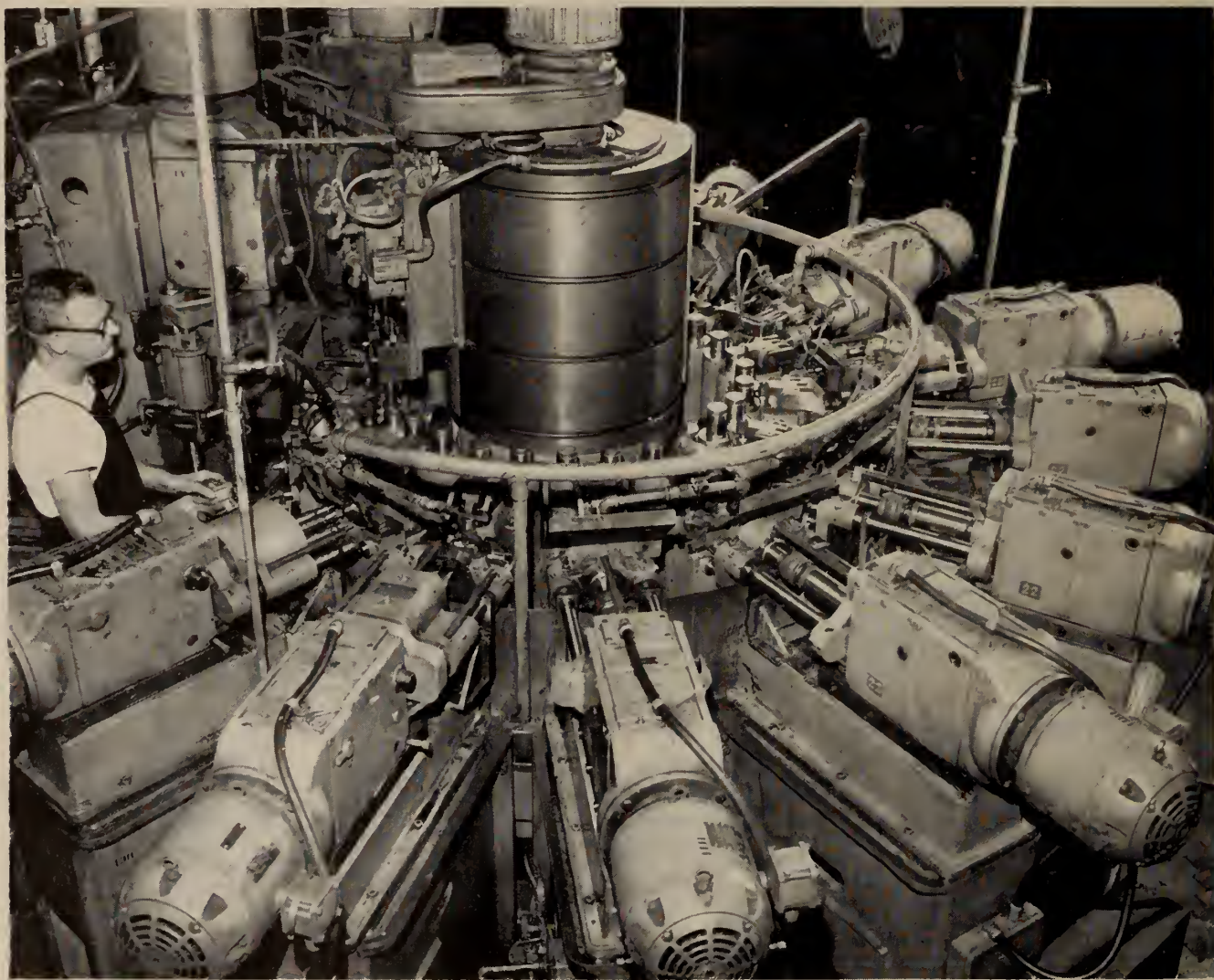
Not only is this process being used in one-product fabrication but it is also being set up in sequences called the transfer process where in one instance in the automotive field crude castings are started at

one end and emerge at the other end finished engine blocks, with one machine doing several operations and then transferring it to another machine for further processing and so on.

The progression of such operations will ultimately come to the place where whole factories will be operated by one or two attendants at a control panel, and in some cases even they may be unnecessary as machines are developed which have correction devices built into them. These are already being used on a limited scale. It is not hard to visualize a plant running continually and automatically 24 hours a day turning out light bulbs, shav-

ing cream or easy chairs in sufficient volume to supply the continent.

What will happen to man in this scheme of things, when he is no longer able to earn money to buy his needs because some super-machine has taken over his job, becomes a major problem and one that was already manifest before the advent of automation. The inability of the present economy to distribute the plethora of goods and services provided by the ever-increasing use of machines made itself very imminent in the thirties. The problem of distribution has never been solved. It has only been aggravated by the still greater conversion of ener-



This is a 14-station Kingsbury Drilling and Tapping Machine used in making V-8 engines. The operator might well use a gymnasium for exercise after his shift of duty.

—Photo Courtesy Buick Motor Division

by which the impetus of World War II gave the production processes. True, the destruction and waste of war made it easier to convince the citizens that the economy was sound but the underlying factors which cause social change were steadily and relentlessly growing ever larger. (Substitution of extraneous energy for manhours in production.)

The solution for the problem of distribution has been presented to the North American public by Technocracy for twenty-some years. The necessity for giving that solution serious consideration at this

time is imperative. The citizens of this Continent face the greatest challenge of all ages — the challenge to adopt a mode of living in keeping with their ability to devise new and better tools of production. In fact it's a must if they wish to survive at all. The caveman knew what to do with the food he managed to acquire through the use of the stone axe, but do we know what to do with the abundance being thrust upon us by automation?

—Ruth M. Berge, 12247-3

Harness For Six Billion Horses

WHERE IS THE HORSEPOWER?

The total energy in all the prime mover engines in the United States is over six billion horsepower. Almost 92 per cent of it is under the hoods of our cars, trucks and buses. Here is a breakdown that shows where our mechanical energy is:

Automotive	5,729,695,600 hp
Power stations	117,852,000 hp
Farms	115,672,600 hp
Railroads	88,706,600 hp
Construction equipment	78,421,250 hp
Ships and boats	37,740,700 hp
Factories	28,800,000 hp
Aircraft	24,781,700 hp
Mines	9,600,000 hp
Miscellaneous	7,156,300 hp
Total	6,238,426,750 hp

coal, oil, atoms and other natural resources into motive power for this country.

A 'horsepower' is what it takes to lift 33,000 pounds one foot in one minute. (Having obliged many horses to pull many weights out of a well, James Watt determined long ago that the average steed was good for about that much work.) Today's six billion horsepower pulls so much weight that the average housewife's share of it alone, in terms of her electric-motored appliances, is equivalent to the energy of 35 able-bodied servants. And if we parceled out all our power, every American man, woman and child would have at his disposal the work equivalent of about 782 men—on the engineering formula that one horsepower equals the steady work of 20 men.

As the iron and steel industry grew, so grew power—since the one imperatively needed the other. This partnership had produced only three American-built steam engines by 1803—out of six in the whole country. But by 1850 the United States had 2,000,000 horsepower. This was only one-tenth of a horsepower per capita, but there wasn't as much in the rest of the world combined. It wasn't until 1899 that we could boast as much as half a horsepower per capital.

IN 1733, on the banks of New Jersey's Passaic River, a sputtering cough announced the debut of the first engine, other than the water wheel, in America. It was an atmospheric Newcomen engine, brought in from England to pump water from a mine near Newark.

Today, the modest efforts of that mine pump have been multiplied into more than six billion horsepower, or about 39 horsepower per capita. That's the sum total of the capabilities of our prime movers, the engines which initially turn the energy of

No combination of horses, weights and wells can measure the human benefits of horsepower, harnessed by steel. The work week has been reduced from 60 or 70 hours to 40, leaving time for Beethoven or baseball. Yet, with all our leisure, we have more power for productive work than any

other nation—more power to lift the weight of toil, and of tyranny as well, from the shoulders of all peoples.

—Reprinted from 'Steelways' published by American Iron and Steel Institute

When referring to the horsepower **capacity** of prime movers in the United States, it is easy for an uncritical thinker to mistake capacity for energy output; and the above article does not clearly differentiate between the two. Six billion horsepower is the theoretical **capacity** of all energy-converting engines if they were all running at full load every minute of every day. This, of course, is impossible of accomplishment, even if it were desirable. On the average, less than eight per cent of the capacity is in use; more than 92 per cent is idle. The great bulk of the idleness is in the automotive capacity, where the average passenger car is in motion only

about an hour per day, and then not at full horsepower capacity.

A further misdirection is the implication that the energy output can be translated into terms of human servants per member of the population. A great deal of the energy actually converted does not go into work that is of particular benefit to the individual citizens; that is, it does not **serve** them. For example, the energy that goes into the production of atomic bombs, or other armaments, or the operation of advertising signs. If a person drives a 100-horsepower car for an hour, it would be equivalent to the energy output of 250 human 'servants' working hard for eight hours. Such an equation is far-fetched in terms of any kind of practical thinking.

The significant thing about this article is the capability of the United States to provide sufficient energy-converting devices to produce abundance of goods and services for the entire population of the North American Continent.

THE PARADOX OF SURVIVAL

The tax money you pay is used by the government to buy enough farm produce and keep it off the market to maintain scarcity. By keeping farm produce scarce, the price stays up; so really you are paying more taxes so that you will have the privilege of paying higher prices for your food.

WEBSTER'S dictionary defines a paradox as being a statement which seems to be at variance with common sense or to contradict some previously ascertained truth. Technocrats, in their investigation of Price System characteristics, uncover lots of paradoxes; here are just a few:

- ... By producing more we shall have less at a higher price!
- ... By increased use of the mass-media of communication (press, radio, TV) we increase apathy!
- ... By becoming more efficient, which we are forced to be in order to stay in business, we are destroying our established economic system.

There are paradoxes with a brighter aspect also; here are a few of those:

- ... By losing at the wars we have been in, or have been trying to get in, we shall gain security!
- ... By organizing non-politically we shall solve our economic and social problems!
- ... To attain security we must abandon our present pursuit of individual prosperity.

We shall explain all the paradoxes listed so far, but first let us put down two that aren't pleasant prospects for most people:

First . . . as a people we do not have a choice of retaining the status quo.

And of all things . . . if we are to practice the brotherhood of man, we must beware the moralistic approach.

We need a historical perspective to be able to understand our modern paradoxes, but not a perspective derived from a study of names, dates and conquests. The understanding of present-day events stems from a perspective on another plane; we refer to the growth of technology and its impact on society.

The technological progression began with the discovery of the use of fire and advanced with the domestication of animals, the first crude steam engines, the automobile, the diesel engine, the airplane, and the automatic factory. With a perspective gained from just a brief look at man's biological

(Turn to Page 16)

Have You Observed?

... **Hurt and scared** by developing economic conditions in the United States, many of the same individuals who were all for republicanism in 1952 showed their sense of insecurity but their continuing ignorance by voting—this last time for the democratic party, which will once again give them a chance to find out how lousy the democrats are. One of the marvels of the century is that it has become nearly impossible to tell the difference between an elephant and a jackass.

... **Mounting opposition** to McCarthy finally has compelled the political expediency of 'toning him down,' to the regret and the chagrin of the militant native fascists of North America. This subversive was recently presented with the support of 250,000 signatures gathered by the Catholic War Veterans. Dignitaries of the Roman Catholic Church are crying that action to slap McCarthy's hands is persecution of Catholicism. Pressure tactics used by the Catholic Church in an effort to save 'their boy' from the censure action brought forth by McCarthy's fellow incompetents involved such unsavory characters as Gerald L. K. Smith, a recognized fascist and a 'top dog' in the officially subversive Christian Nationalist Party, it was reported. It's a shame that there hasn't been one individual — prominent enough in the Price System to compel public attention—with enough guts to blow the lid off of the Catholic conspiracy to impose fascism upon North America by pointing the finger where it belongs. It isn't a matter of religion. The infiltration and organized numbers of the Catholic fascists make them the most powerful and dangerous political force on North America. Their legions fight to dominate every operation of the Price System. Their great fear is exposure for what they are. Perhaps that is why they fight to save 'Joe.' If he is discredited, being Catholic, it could precipitate a trend which would undermine the Church in North America. Maybe a few Americans would begin to show that they aren't living miracles, without brains or guts!

... **Dull, ponderous** Senator Knowland soon will be a candidate for a high dive from a handy building

at the rate he is going. He's a perfect example of forrestalitis. He and a motley collection of fellow politicians, generals and admirals are calling loudly for a break in diplomatic relations with Russia and 'preventive war' with that same country. News commentators report that Russia is graduating engineers and other technical personnel at two and one-half times the rate of U. S. schools, which is the cause for alarm. People of the 'Knowland' school of thought would have the U. S. pause in its own race in physical progress in an attempt to destroy Russia, rather than to go on with confidence that we can maintain our technical superiority. Knowland may be too dumb to realize it, but what he is telling the American people and the world is that the Price System of North America is seriously interfering with scientific progress which spells protection for North America. But rather than to abandon the social system that is endangering our security, we should risk destruction of the sum total of human progress up to this time by fighting Russia. Technocracy contends that North America has no cause for fear. Technocracy offers a social system superior to any the world has ever known. With the knowledge and tools to forge ahead, if we should experience defeat, it will be by our own hands. Our greatest obstacle is our ignorance. Fear is the result of ignorance. With Technocracy here to provide understanding of our problem, and the answers we need, we shall go forward. North America's greatest achievements are just ahead. Make it easier for all by joining and giving Technocracy a helping hand.

—Harry Briggs, 12247-1

Fifty times in the history of what is now Eastern Kansas, ancient seas submerged the earth and as many times the land rose from the waters. So says Dr. R. C. Moore, Kansas state geologist, who found in alternate layers of sea and land fossils in the rocks of his state, definite evidence of a 'Geological Rhythm—like a great giant breathing.'

DEVELOPING TRENDS

U. S. OUTLAY HELD KEY TO '55 ECONOMIC GAIN

The extent of the improvement of the economy in 1955 will depend upon the amount of money spent by the Government, an economist said recently.

Dr. Leo Barnes, chief economist for Prentice-Hall, Inc., predicted, however, that there would be enough Federal spending next year to stimulate a major increase in business activity.

Dr. Barnes also looked for more unemployment despite improving business. He saw 4,000,000 unemployed before the end of this year based on the growing civilian work force, the rising number of releases from the armed forces and the exceptionally high rate in the increase of industrial productivity.

—New York Times

—Are we finally admitting that machines do not make jobs and that the government must maintain the purchasing power by spending in order to make the Price System work?

MINE, FACTORY PRODUCTION IS OFF

The nation's mines and factories produced 5 per cent less in October than they did in the same month last year, the Federal Reserve Board reported, despite a rise of 2 per cent over September production.

The FRB said production rose further in November, especially in the automobile and steel industries.

—AFL News Reporter

AUTO DEALERS FIGHT PERIL OF BANKRUPTCY

ATLANTIC CITY—At least 8,000 automobile dealers are walking the brink of bankruptcy right now—and it will be a miracle if many of them survive the brutally competitive era shaping up for 1955.

That's the startling, chilling judgment of some of the nation's top automobile dealers themselves—men who have just wound up the 34th annual convention of the Pennsylvania Automotive Association, largest association of automobile dealers in the country, here.

At the peak of the post-war automobile boom, there were about 45,000 car dealers in America.

Today, that number has shrunk to about 41,000—already reflecting a sharp shake-out.

—Newark Star Ledger

—The squeeze has only begun, not only when it comes to selling the new cars but when it comes to driving them as well. Have you been out for a Sunday drive lately?

TEXTILE DILEMMA

NEW YORK—A plan for easing the depression in the textile industry was offered recently by Emil Rieve, general president of the CIO Textile Workers Union, who said it had been submitted to President Eisenhower at the President's request.

"Since 1950 the textile industry has suffered a sharp and continuous shrinkage," Rieve declared. "Some 270 yarn and weaving mills have been liquidated * * * employment of production workers has fallen by 275,000 since the first quarter of 1951. Less than a million are still employed, and many of these are on short time."

Rieve's plan calls for these five steps:

Distribution of textiles to needy nations overseas as part of the foreign aid program in the same way that coal and agricultural products are now handled.

Distribution of clothing to needy Americans, in the same manner as surplus food.

Re-establishment of textile stockpiles for the armed forces.

Supplementary unemployment benefits for workers in distressed areas who have exhausted their state insurance.

A federal research program to study consumer trends and investigate new uses and new markets for textiles.

Rieve said he had submitted the plan October 27 but had withheld the news until recently to avoid any implication of politics. The President requested the plan after Rieve wrote to congratulate him on the decision to send coal abroad to help the ailing U. S. coal industry and suggesting that similar aid be offered the textile industry.

Rieve blamed a major shift in consumer buying habits and technological improvements as the major causes of the industry's decline.

"In any other basic industry this degree of dislocation and distress would long since have attracted national concern," he said. "But the dispersed nature of the textile industry makes each failure look like a strictly local affair," Rieve declared.

—Newark Sunday News

—Once again the evidence is that technological improvements are the cause of trouble for the Price System.

DISTRIBUTION STUDY URGED

"The American economy is on the verge of a desperately needed 'era of scientific distribution,'" Thomas B. McCabe, president of Scott Paper Co., told members of the Sales Executive Club of Northern New Jersey at a luncheon meeting in Newark recently. "It has become obvious, almost to the point of embarrassment," the former chairman of the Federal Reserve Board said, "that our economy rests on three legs, not just two. This third leg, distribution, has not had the benefit of the scientific study which has contributed so much to the other two segments—research and production."

"However, distribution must now be surveyed with the

THE NORTHWEST TECHNOCRAT

same intense, penetrating scientific study to which research and production have been subjected. Industry, its consulting agencies and the educational institutions should unite in a program of fundamental research that will go deeper toward the heart of distribution problems," he said. "The principal objectives of fundamental distribution research," McCabe said, "would be the reduction of marketing costs with consequent lowering of prices and the widening of markets. Sales, production, employment and earnings would be given greater stability through better knowledge of how to stimulate consumption. The new products on which our economy depends could be more effectively introduced at lower costs."

—Everett Daily Herald

CONTROLS FREIGHT CARS

NEW YORK—Automatic control of moving cars in freight car classification yards with electronic equipment was announced by Union Switch & Signal division of Westinghouse Air Brake Co.

The company claims the equipment, which can be installed in new or existing yards, almost eliminates impact damage resulting from human error.

The equipment weighs each car, determines its over-all rolling characteristics by radar and continually measures its speed. This and other information is fed into an electronic brain. This calculates the braking-effort required to slow the car for proper coupling speed and establishes the desired control through standard car retarding equipment.

By adapting a recorded classification list, the routing of an entire train of cars can be handled automatically, Union Switch says.

—Wall Street Journal

TOWARD PUSH-BUTTON FACTORIES

Among the many products whose application is farther advanced is the punch press with the built-in electronic "brain." Developed by General Electric Co., it is wholly automatic—like many other robot-like machines now doing machining and assembly work formerly done by many men. But the G.E. punch press carries the move toward push-button factories one step farther. Its "brain" directs it in adjusting itself to different production processes.

Here's how it operates: An electronic device receives instructions from perforated cards, whose perforations represent a code describing the size, number and location of holes or other shapes to be punched. The electronic device, or "brain," then feeds impulses based on this information to the press's mechanical parts, causing the automatic positioning of the materials to be punched and the performance of the punching chores with great accuracy.

"This machine right now is helping G.E. fulfill contract work with the U. S. Signal Corps," company officials disclose. G. E. expects shortly to have similar machines which would perform such other factory functions as drilling, riveting, stapling, even electrical testing on many different sizes and shapes of products—not just on one, as customarily is the limit with automatic machinery now in use.

—Wall Street Journal

SCIENTIFIC TRAINING NEGLECTED BY U. S.

The free world is in danger of losing the important technological race for trained scientists, engineers and technicians. The Soviet Union is making an intensive effort to increase its supply of technically trained personnel.

While the democracies of the world, including the United States, are looking the other way, the Soviet Union and its satellites are training scientists and engineers at an almost feverish pace. The Soviet Union has set out on a definite state policy to first reach and then outstrip the free world in the preparation of scientists and engineers essential for survival in the atomic age.

At the same time, the quality of the Soviet technical schools and colleges is steadily rising. A study of the world's free nations, conducted by The New York Times, shows that little emphasis is placed upon the training of scientists, engineers or technicians. Not many educators are aware of the tremendous Soviet spurt in the scientific fields.

Educators are convinced that the United States and the free world generally will have to take stock at once, and map out a constructive program to maintain technological leadership. Dr. James H. Taylor, assistant director for manpower, Office of Defense Mobilization, holds that this country is not training enough highly qualified scientists and engineers to meet the requirements of our national defense and economic growth. He warns that the preservation of our technological leadership cannot be taken for granted. It can be maintained only by well conceived plans and vigorous action.

Dean S. C. Hollister of the Cornell University College of Engineering, calls the situation in science, engineering and technology "truly critical." Observing that our national defense rests on technological superiority, Dr. Hollister says that the Soviet Union is turning out more than twice as many engineering graduates as is this country, and with training comparable to our graduate level.

"Many persons fail to realize the impact that science, engineering and technology have had in our national life and world affairs," reports Dr. Hollister. "We can even note a desire that scientific and technological developments be curtailed. This would surely be the road to national suicide. The lack of understanding of the role of science, engineering and technology in our society is perhaps the gravest element of our present situation."

—New York Times

PASSENGER CONVEYOR BELT

NEW YORK—The four-block shuttle subway run between Times Square and Grand Central Terminal will be replaced by a conveyor-belt system.

As announced recently, the conveyor will work like this: Riders will board gondola-type cars on a moving belt traveling at a mile and a half an hour in the loading areas. The cars will accelerate to 15 miles an hour in the tunnel.

The \$3,881,000 contract for the new system, expected to take two to three years to complete, was awarded to Passenger Belt Conveyors, Inc., of Akron, Ohio. An additional \$1,100,000 will be required for reconstruction of the tunnel.

—Seattle Times

—Efficient materials handling whether it be iron ore, manufactured products, gravel, coal, or humans is readily accomplished with conveyor transportation.

Paradox of Survival

(Continued from Page 12)

cal history, our technological progression seems like an explosion. It has happened so quickly that our social habits (traditions, mores, and folkways) haven't kept pace.

Society has always used some form of Price System as its means of distributing goods and services. But a Price System can only distribute a scarcity; and therein lies our trouble. You see, when anything becomes abundant, its value in terms of price disappears. The nation's farmers would have long since gone bankrupt had the government not intervened with subsidy and price support. Yes, the tax money you pay is used by the government to buy enough farm produce and keep it off the market to maintain scarcity. By keeping farm produce scarce, the price stays up; so really you are paying more taxes so that you will have the privilege of paying higher prices for your food. Crazy sounding, isn't it? Well, just read your newspapers about the terrible surpluses your government must eliminate by first buying and then storing them, giving them away to foreigners, or destroying them. Intelligent? This makes sense only if you are convinced that maintaining the Price System is the ultimate aim of social operation. A person with such a view might be defined as an optimist; and a pessimist might be defined as one who concurs in that conviction. To a Technocrat, hope or lack of hope is a poor substitute for action based on factual appraisal.

Our technology has given us problems in other places besides agriculture. Our industrial output is so terrific that we can't use it up—not even with war. Not many people are aware that we got rid of more ammunition in Korea than we did in Europe in World War II. Some idea of how fast our productive capacity is growing can be gained from the following:

In World War I we exported 10% of our production.

In World War II we exported only 4% of our production (more goods but a lesser percentage).

In 1951 with the Korean war going full blast, 10% of our production was going into inventory. Think for a minute how big a war would be necessary to

get rid of our surplus production now. We can now produce both guns and butter! As Howard Scott once said with a chuckle, 'The solution is to declare war on the Pacific Ocean. The Pacific Ocean is big enough to hold it all and it can't surrender!'

Well, how about Russia? Will Russia be obliging enough to fight us? On the contrary, all the evidence points to the conclusion that Russia is a smart **enemy** and, therefore, will probably pull the dirtiest trick on us that she could conceive of, namely, to declare peace on us! How horrible, those Russians!

No, war is not probable now. A land army war against Russia is improbable because of the logistic problem. The Germans deployed 240 divisions against the Russians and less than 60 against the combined allies. This will give you some idea of the importance of the length of supply lines. Any military man knows that to engage Russia in a war of World War II type off this continent would be suicide. The same applies in reverse if Russia were to try to fight a war over here. And we can't consider a successful atomic war either. A few fusion bombs with cobalt casings can loose enough radium rain to destroy at least all human life on earth. Even a businessman can understand that there is no profit when you kill your prospective customer, especially when, as a second consideration, you would kill yourself too.

A Continuum

In connection with the possibility of World War III, we must consider another factor that you may be rather squeamish about contemplating. Take the trouble to analyze the politics of the world and what you must conclude from your analysis will be difficult for most people to accept. Here it is: A scale upon which one can place all the items in their order from one extreme to the other we call a continuum. A continuum of present-day politics would show Russian Communism on the extreme left. Now comes the difficult-to-accept idea that Roman Catholic fascism is the extreme right of the same continuum of present-day politics!

If you study a bit you will soon be struck with the evidence that there is a worldwide conflict between two major political ideologies—Russian Communism and Roman Catholic Fascism. (Both of these we point out are Price System philosophies.) And let's not forget that the U. S. government was constructed out of ideas which were European in origin and which are intermediate between the two extremes.

(Turn to Page 20)

Polyethylene

THE DAYS of the cookie barrel and the sugar bin and the grocery man to individually assist you with your purchases are gone from the scene today. Even in remote small towns these things are non-existent. These happenings were much in evidence only 35 years ago. Today most items are packaged for your convenience, cleanliness and protection. Due to the fact that many more people are served by fewer stores the process of getting goods to the customer has to be speeded up. The change has been gradual, but the speed at which it is accelerating is phenomenal. During this period we have seen the change from a large number of grocery stores, drug stores and meat markets to today's super markets, cutting out in increasing numbers the small grocery store by providing more desirable conditions in which to shop. The large serve-yourself drug stores with the bottleneck check stand to which you pay your debt tokens is cutting out the small ones by volume selling. A high volume of sales can even reduce the price of 'fair-traded' items. Even the number of check stands has been increased so that the service will warrant your return. The cold storage meat counters with sealed packaged meats are received with the comment, 'That's the way to sell meat.' The old custom of closing the meat counter because the butcher's union says so will go by the wayside the same as has closing the grocery store evenings and Sundays.

Familiar Packaging

We are all familiar with the tin can, the paper box and the glass container. Food has been and still is packaged in tin cans with the double seal. Medicine, in the form of tablets and fluids, has been packaged for years in glass bottles. Crackers and cookies have been packed in paper boxes for a long time. These forms of packaging are commonplace today, but the purpose of this article is not to tell the reader about the familiar. It is rather to tell him about some of the revolutionary new methods of packaging and the machines which do the packaging.

The Warner-Chilcott Laboratories, a pharmaceuti-

cal manufacturer, employs an electronic counting machine which is capable of counting pills at the rate of 1,000,000 per hour. This machine is not only a counting machine, but can be adjusted to fill bottles uniformly from 25 to 5000 pills per bottle. Practically, the counting speed is limited only by the number of bottles an hour that the filling operation can handle. Counting 25 tablets to a bottle, the machine fills 2700 bottles an hour or at the rate of 67,500 tablets an hour. At 500 tablets to a bottle, it puts 1,350,000 tablets into the same number of bottles every hour. To give the reader an idea of the change in rate of filling bottles with tablets, we will compare the hand rate with the mechanical and electronic rates. Mechanically, 300,000 tablets could be counted in an eight-hour day, more than twice the earlier 120,000 hand rate, but only about 3 per cent of the electronic counter's operating speed of 10,350,000 a day.

Reasons for Changing

Some of the reasons for changing the methods of packaging are cleanliness, visibility, elimination of waste, discouragement of pilfering and increase of sales.

The new polyethylene bags and wrappers are reducing the chance of spreading disease, are transparent so that the customer can see what he is buying and the quantity he is getting. Another example of new packaging is the fancy plastic container which, after serving as packaging, can be used as a refrigerator dish. The aluminum foil pie plate can be used for packaging frozen food and then used as a heating tin and then as a serving dish. Multiple-use packaging devices are just beginning to show.

45 Million Pounds

Polyethylene is the fastest growing of the flexible packaging materials. Last year two basic producers supplied about 45 million pounds of polyethylene to the packaging industry. This year the production capacity will be nearly doubled. A pound of this very thin wrapping material will wrap several cubic feet of goods. Six other companies are going to try

to get some of the 'plum' by manufacturing this popular wrapping material.

Polyethylene's main stamping ground is the supermarket produce counter. The case of the missing carrot tops is an example of the rapid changes in buying habits brought about by this transparent wrapper.

Until a few years ago carrot tops were shipped with the carrots. Farmers, produce companies and grocers all knew that if the tops were cut off, the carrots would dry out. A dried-out carrot, which might taste something like balsa wood, is not very saleable.

By shipping the tops with the carrots the added weight boosted the shipping costs. The other disadvantage to shipping carrots with their tops is that the green tops steadily drain nutritive value out of the carrots.

The obvious solution was to pack the carrots in moisture-proof bags. The cost of the polyethylene in which the carrots are packaged must have been less than the shipping costs of the tops for nearly all carrots shipped from major suppliers in Texas, Arizona and California are packaged in this manner.



Cellothene, a transparent film laminate of polyethylene and cellophane, retains flexibility and tear resistance in extremes of climate and weather, and handles efficiently and economically in printing, filling, and heat sealing.

—Photo Courtesy Cheslam Corp.

Polyethylene is used to package candy, bakery rolls, bed sheets, silverware, nuts and bolts. Even an automobile has been wrapped in polyethylene.



Individualized portions of jelly, mustard, soy sauce and ketchup and one-application packs of shampoo and neutralizer are being packaged in Cellothene.

—Photo Courtesy Cheslam Corp.

Combinations of polyethylene and other materials offer still more uses for the flexible plastic. The polyethylene-cellophane combinations offers the manufacturers a means of advertising. The product name and sales message may be printed in reverse on the cellophane, and then a layer of polyethylene may be extruded over the printing. A new triple layer material consists of a strong paper with a metallic foil bonded to the inside and polyethylene on the outside. A package made of this material is said to be almost comparable to the tin can in moisture and vapor resistance.

Advancements in the 'tin' can industry include the use of lighter-gauge steel, tin plating a different thickness on the inside from that on the outside, the use of organic coatings and the new side seam cements for cans.

Bottles and jars are looking for new marketing possibilities and one is the aerosol market. Insect sprays, shaving cream, whipped cream are pack-

aged under pressure and the release of the pressure serves the product. Glass presented quite a problem in this field. If a bottle breaks or explodes into flying glass, that type of container would not sell very well. The engineers developed a mist spray plastic coating for glassware under pressure. Improved processes for making glass and closer control will produce a bottle with greater uniformity.



The new Lipton soup packages are a triple lamination of pouch paper on the outside, foil on the inside and polyethylene in between. In addition, the pouch paper is high-gloss coated.

—Photo Courtesy Riegel Paper Corp.

Along with a realization of the marketing possibilities that the new packages offer, there is a growing awareness among packagers of the cost. Packaging is no longer an incidental service. The package is part of the product; and for many items, it's the most expensive part. Modern Packaging magazine found that the package represented 70 per cent of the total cost of a tooth paste, 50 per cent of a soap, and 8 per cent of a bread.

By and large, the new packages are more expensive than their predecessors. They have to perform additional services, each of which adds to the cost. The place where packaging costs can be cut most efficiently is in the plant of the basic producer. That's why, running all through the packaging revolution, is a shift of the packaging operation away from the retail store to the factory. This shift also brings the package closer to the engineers—which is, perhaps, another reason why technology is playing a more important role these days.

The machines are finally catching up with the materials. The most interesting ones are those designed specifically for flexible materials. Each unit consisting of a complete packaging line starts with

a roll of film, makes a package, fills it and seals it. Speed, simplicity and ease of operation are big features of all the new packaging equipment. Another development is pressure filling of Aerosol products. The packaging of irregular shaped objects has been accomplished by a machine designed by McKay-Davis Chemical Corp. This machine packages such items as tooth brushes, combs and surgical instruments in close-fitting minimum-sized packages. The machine works with practically any heat-sealable flexible material.

A new controlled-atmosphere machine is small and fast. Primarily used for vacuum packaging, it can be converted for packaging certain foods in inert gas to increase their shelf life.

Every time a new machine is added to the industrial complex it takes up less floor space, operates faster and requires fewer people to operate it. Adding new products, or new ways to package old products, or new machinery to package products, reduces the use of the old products and makes the old machinery obsolete. Advancement is made when more things are produced under more desirable conditions for more people. But if one lives by wages, and most of us do, it is difficult to purchase any product when one has not been working.

Join a Technocracy study class and learn how the Price System operates and learn about a scientifically controlled society.

—George A. Kellogg, Jr., 12247-3



The versatility of this machine is amazing. It will package spoons to Zircons—singly or in multiple units—using such materials as cellophane, aluminum foil, polyethylene, glassine or Saran.

—Photo Courtesy Roto Wrap

Paradox of Survival

(Continued from Page 16)

Lately the U. S. has swung from a position just to the left of center to one quite far to the right of center; we now favor the ideology of the Vatican as opposed to the ideology of the Kremlin. The Kremlin has military forces; the Vatican does not, but nevertheless the Vatican has declared war on the Kremlin! It was Hitler's and Mussolini's army, and now the U. S. Armed Forces which have been enlisted in a vain attempt to save Roman Catholic fascism. The goal is not only to restore the Holy Roman Empire, but to eventually Catholicize the entire world!

Technocracy reports these proceedings, all the while insisting that for the future it doesn't matter too much who, or what political control, is dominant in Europe. The steady growth of technology in Europe means an eventual consolidation of the entire continent. And when technology becomes dominant in any area, then a functional control is the only social control which will operate successfully in that area. The importance of politics of either kind is thus fading in Europe.

North America, however, is faced right now with the imminent change to functional control. America has reached the point where nothing short of a consolidation of the entire continent of North America, operated by a functional control as proposed in Technocracy's design, can operate the vast array of technology we possess without disaster. We have no choice in this matter. We cannot abandon our technology, rather, we are forced to build it bigger. We depend for our lives on its continued operation and if we do not learn to control it we shall soon be the victims of our own creation. It's sort of like an ever-growing robot; we built the thing; we enjoy the service it performs for us; but take a look at its size! Uncontrolled, it is a monster. The Price System is showing the signs now of its final break-up. If we are not sufficiently ready with functional control, Technocracy estimates that 80% of us could die within three weeks of the time we reach crisis.

Well, why don't we install this functional control? Probably for much the same reasons that many people have been kept from joining Technocracy.

They haven't been aware of the nature of the problem, or of Technocracy, or they have been subdued by the Great Fear.

We have seen in just a few years a terrific increase in the size of a social 'class'—the 'middle class.' This class, with its houses, cars, and washing machines, and with its forgotten destitution and misery, has embraced a snobbery which formerly belonged to the aristocracy. They like the stinking Price System as long as they are comfortable!

A sociologist named Lazarsfeld has coined a term **narcotizing dysfunction** to describe the mental condition caused by the present use of the mass media of communication. This is the apathy we see so much of lately. Lazarsfeld holds that the terrific barrage of words through the mass media creates a drugged effect. We would add that a comfortable body does not put demands for solutions on the brain; the acceptance of a propaganda line now suffices as a substitute for an intellectually-arrived-at conclusion.

Freedom of Religion

No better example of an apathetic America could be had than the lack of protest over the recent change in the pledge of allegiance. We are supposed to be guaranteed freedom of religion by the constitution; there is supposed to be a separation of church and state. But just let someone suggest that the words 'under God' be left out of the new pledge of allegiance and all the meanness in society will then be loosed on that poor unfortunate.

The Eisenhower crusade is serving the function of providing an outlet for our feelings. We aren't given correct answers and, more and more, problems keep popping up. Anxiety and frustration grow and we haven't any other dog to kick than the 'dirty unchristian' Russians. They deserve it anyhow (we are told), so go ahead and kick 'em good. Besides, maybe the Russians can be provoked into fighting back.

The Great Fear that has been generated by the investigating committees is an almost exact duplicate of the tactic Hitler used to convert Germany to fascism. (To his brand of fascism, that it.) And of all people, who but protestant leaders are helping in this effort! Many protestant ministers (with a little boodle in stocks and bonds, perhaps) are spouting the Roman Catholic fascist line as avidly as a Joseph McCarthy or a Cardinal Spellman. Poor dopes! If they succeed in getting what they say they are

(Turn to Page 24)

ENVIRONMENT

and the Way of Life

IN THE STRUGGLE for survival, primitive man lived like an animal in a primordial environment. His small teeth and weak nails were no match for the formidable armament of some of his adversaries, nor could his strength and speed compete favorably with theirs; yet, the demands of survival often threw him into direct combat with other beasts in fierce and pitiless battles to the death, in which the victor gorged himself on the flesh of the vanquished and, thus, survived to do battle another day. Sometimes, it was primitive man who ate the flesh of his victims; but, often, it was his flesh that went to satiated the hunger of some other animal.

This was the way of life in the rough. The toughest and most wily individuals tended to survive, while the weaker, the unwary, and the less versatile more often perished at an early age. It was inevitable then, even as now, that something must die to provide food for those that continued to live.

It so happens, today, the same as in the primeval past, there is no other way of life except that which flourishes on the death and decomposition of other things which have lived. Even the green plants, which are least dependent of all organisms upon the death of others, thrive upon humus in the soil which is derived from death and decay. Most plants—not all, for there are startling exceptions—do not destroy outright the living bodies of other organisms, but imbibe nourishment only from the remains of those which have died from other causes. However, in the unrelenting struggle for space in which to live, the green plants crowd life from many other plants. In the natural process of living things, the orderly path follows these stages: a lavish dissemination of 'seed'; germination of a fraction of this seed; a precarious growth to maturity; death; and decay. For the great majority, the way of life is the way to an 'untimely' death.

For savage man, in bygone ages, the struggle to survive was no less crude or severe than it was among other creatures. Because the only energy available to those human primates was the energy of their muscles, derived from the food they ate, the

predominant concern dealt with the acquisition of food as fuel for this energy; and only slightly secondary to this was the problem of evading other animals which were seeking them as a source of food. Sometimes, when the matter of food supply became critical, it was the practice to resort to anthropophagy as an expediency of survival. Thus, through cannibalism, the race was sometimes able to surmount its more critical food crises. Nature, while careless of the individual, appeared devoted to the species.

But man was not to remain always in the status of a primordial animal in an untamed environment. He had a brain that enabled him to find crafty solutions to many of his problems, solutions that were beyond the reach of his competitors. He was able to make use of caves and trees as shelters and retreats, often taking them from, and defending them against, other animals less clever than he. But the predawn of modern civilization began when he discovered the advantages of a club. With a length of stout wood, he was able to greatly extend his reach, increase the leverage of his arm, and deal a crushing impact upon the body of another animal. It was an improved means of defense and offense which tipped the balance of nature a little more in man's favor and increased the survival hazards for many other forms of life. Perhaps, because of this and other related discoveries, a number of species of mammals which were contemporary with early man are now known only from their fossil remains. The way of life for man was set on a revolutionary new course with the discovery of the club. The advantages of man over other elements of the natural environment began to add up.

But man's journey along the road to modern civilization was neither fast nor steady; it was slow, long, and painfully rough. There is little superficial resemblance between the primitive troglodyte shivering in his dreary cave and modern man living comfortably in a swank mansion, serviced with innumerable technological devices. It is a far cry

from the skin-clad savage woman to the fine lady of today, with her perfumes and furs and luxurious leisure and comfort. But the main differences are in man's environment and paraphernalia; the elemental nature of the animal known as man has changed very little. It has been said, 'It's a thousand years to civilization and only seconds back to savagery.' This return to the savage has been demonstrated many times under chaotic circumstances, where mob emotions take command.

Perhaps it was the discovery of the cutting edge more than any other single device that started mankind on the technological path. Chipped stone came first, followed by polished stone edges, then copper, bronze, iron, and steel tools, now tungsten carbide. For most of man's history, his tools were powered by his own muscles, whose energy output under working conditions never exceeded one-twentieth of one horsepower. Technological growth became spectacular only when man learned to capture and utilize extraneous energy. The living standard of people is closely pegged to the amount of energy employed to power man's activities.

Toward a Better Life or Oblivion

Each new event in succession, to some degree, blots out the past and prepares the way for the future. Events are the signposts of history, pointing out the direction of social change. When the events which marked the way were technological in their significance, the way was one of progress. When events appeared as responses to authoritarian decrees, they sometimes led to glittering citadels; but invariably, beyond the show of splendor, which was always of temporary duration, was social retrogression and, often, complete oblivion. The way of technology is the only one that is marked by a continuous procession of progressive events. Beginning with the unmarked trails through the forest, the way of technology is successively symbolized by widening paths, crude ox-cart roads, drained and graveled highways, and six-lane, paved, high-speed thoroughways.

Discovery of the basic principles of mechanics appear as great signposts along the technological road. Among these were: the wheel and axle, which permitted faster speeds and heavier loads; the inclined plane and the screw, which increased man's lifting power; the lever and fulcrum, which multiplied man's power in moving and lifting objects; the wedge, with its ability to split things more easily. These inventions enabled man to accomplish more with his muscles than he had been able to do be-

fore. But, it was not until extraneous energy and automatic techniques were applied to the processes of work that man was able to free himself from toil. Only with the advent of automaticity and streamlined technology could man contemplate a way of life that was free of burdensome and time-consuming toil, that was free of poverty and privation, and full of opportunity for self-development of the individual.

In the dim recesses of ancient times, primordial man learned that he could control fire to his own advantage. Thus began the first significant use of extraneous energy. Fire provided heat to warm his body and cook his food; it provided light to see by in the darkness of caves and in the night; it was used to smelt ores, to soften metals for forging, and it was used to split rocks. But the energy of fire could not be utilized in a mechanical way until an engine was invented to transform heat into work. This was achieved with the invention of the steam engine. The Power Age dates from this event.

Fire was also used for purposes other than those designed to effect human comfort and social progress. It was used in various processes of torture and in the destruction of the works of man. Man used it to burn the cities of his fellowmen and to fill the air with the stench of their roasting flesh. In its modern refinements, civilized man releases fires of destruction on a large scale and by means of hellish devices. With napalm fire-bombs, he burns a thick crust on the bodies of his victims, and he desolates their habitations. Not content with this, he devises atomic and hydrogen bombs capable of obliterating whole areas and scattering death-dealing ashes for hundreds of miles beyond those areas.

Controlled Technology

Controlled technology has provided mankind with untold comforts and facilities. It has enabled him to gain dominion over the plants and animals of the earth. But, if the powers of modern technology are allowed to fall into the hands of human fiends, our civilization could well be destroyed and surviving remnants, if such there be, may well revert to the age of savagery. One may gravely consider that the atomic age is just in its infancy and has yet to grow up. It will grow into gigantic power as more knowledge is uncovered by science and is applied to various uses. All should realize with sober thought that there are those who are now banded together—megalo-maniacs who would dominate other people and force upon them a narrow, proscribed way of life—who would not hesitate to use

this gigantic explosive force to gain their ends. Such men have long shocked the conscience of mankind with their brutality, their Inquisitions, and their enslavement of their fellowmen.

There have been times in the past when paranoic individuals were placed in the seats of power, and humanity bled and suffered on a large scale as a consequence. We need only mention a few names to recall to mind nightmarish horrors: Cheops, Solomon, Nero, Pope Innocent III, Napoleon Bonaparte, Adolph Hitler. Now, civilization rests on the razor's edge, capable on the one hand of being elevated to heights of grandeur beyond the fondest hopes of mankind, and on the other hand of being plunged into a cauldron of extinction. It is futile, and it may prove fatal to the race, to seek consolation in the hope that such a fearful act as the destruction of human civilization is too terrible for anyone to contemplate. Be warned, there are altogether too many people in the world who are capable of that very thing and who would gloat over the prospect, even though it would mean in the end their own annihilation.

Mutations

There is much speculation and fear that the particles released from atomic explosions may scatter dangerous radiations over a wide area, and that these will create extensive mutations in the chromosomes, thus producing monstrosities, not only in humans but in other animals and plants as well. The efforts of the atomic bombs dropped on Hiroshima and Nagasaki provide ample justification for such speculations. Should cobalt bombs be exploded, there is a possibility that the radiations would be so intense for so long a time that, should living things be able to survive at all, there is a probability that mutative deformities would occur on a grand scale.

The enemies of a technological civilization, beneficial to all mankind, are busy kindling the fires of anger and distrust with their cold war tactics. Consulting the oracles of fixed beliefs in divine guidance, the ouija boards of political opinion, and the crystal balls of economic foresight, these megalomaniacs see themselves as the rulers of the world, with all mankind compressed into one ideological mold and groveling before them as obedient, worshipful, and frightened subjects. These are the men around the world who can hardly wait for World War III to get underway.

In the meantime, on the straight road of technological progression, many men are absorbed in the

search for knowledge and techniques that will broaden man's comprehension of nature and his utilization of its hidden resources. They are using radioactive elements to trace out, among other things, the physiological processes of green plants in their quest for the secrets of photosynthesis, the process by which green plants take carbon dioxide from the air and water from the soil and, with the aid of certain mineral salts and sunlight, manufacture the basic substances of all food. The day is envisioned when photosynthesis can be duplicated in the laboratory and man will be able to provide himself with an unlimited food supply. This will be a far cry from the tooth and nail struggle for subsistence that characterized the way of life of our savage ancestors.

A careful study of the scientific and technological trends clearly reveal that man must accept and adapt to a new way of life. Technology decrees that more and more human toil will be eliminated by power driven machines and the automatic factory. Technology indicates that future man must learn to adapt to a life of abundance and leisure. Leisure in this sense lacks the connotations of the past, where leisure was regarded as the antithesis of socially useful work; rather, it will consist of that time which one can do with pretty much as he pleases. The moralistic utilitarians have always protested any improvement in man's physical way of life and have vociferously lamented any release from toil that came his way. But technology decrees otherwise. Unless he destroys himself first, man soon will be free of toil and have an abundance to consume.

Answers to Problems

When the phenomena of nature are explained in the simple and definitive terms of science, and when social endeavors are arranged in accordance with technological design, the confusion and complexity that misdirects and stupifies the minds of men will be dissipated and volitalized. Answers to problems will be sought within the problem itself and not in the realm of the intangible; for, make no mistake about it, all answers arise out of the problems that confront us, and to search for the answers elsewhere is to end up in futile confusion. Thus, the mind of man—his capacity to think and act in harmony with his environment—will rise far above the present level, where it is drugged with the weariness of toil and worry, the dead end tangles of confusion and conflict, and the lethargy of futile monotony. The

average man will not, even then, arise to creative heights of intellectual brilliance; that capacity is not in his chromosomes. But even a moron can adapt himself to an environment that he comprehends insofar as it effects him personally and, therein, acquire a pattern of behavior that simulates intelligence.

Those who direct the destiny of our civilization on this Continent of North America must be well armed with the knowledge and attitude of science. They must understand that the problems of society are measurable and they must know how to apply the methods of measurement to those problems. They must rely upon factual perception as the basis for their judgments, not upon the oracles of superstition.

The technological way of life shall abrogate the arduousness of toil and the plague of poverty. It demands the adoption of the measurements and methods required in the distribution of abundance to all inhabitants, the abundance which technology alone makes possible—the methods and measurements specified in Technocracy's program for the New America.

Technocracy's design for the physical operation of North America points to a new way of life, one in which strife is an insignificant factor, in which there will be a minimum of human effort required, and in which there will be a maximum of cultural opportunity—a way of life that is commensurate with the age in which we live.

—F. C. Glenn, MAL

There is no longer any doubt that if the necessity arose we could produce all the corn and wheat for the nation's needs in a couple of states at about one-third the present cost and effort.

—Gen. Hugh S. Johnson
World Telegram, New York, N. Y.

Upwards of 70 per cent of all Europeans are now living in the shadow of state controlled enterprise. And as for private interests, 'It is not with a few personalities that they must come to terms, but with a maelstrom of impersonal, historical force.'

—Stuard Chase, *Government in Business*, 1935

Paradox of Survival

(Continued from Page 20)

after—namely an America united under God—they will have helped install an organization which will not hesitate to lobotomize all voices of opposition.

You will have to conclude if you consider the facts that the only way we can live with each other instead of off each other is by installing a functional control. Ironical then, isn't it, that most ecclesiastics take the positions they do in defense of the status quo?

But the ecclesiastics aren't alone. Most Americans will have to be kicked out of every foreign land, will have to have their properties become worthless, will have to become actually hungry before a few simple facts of life can be brought to their attention. Technocrats are doing the best they can to be ready when that time arrives. If enough Americans are aware of the existence of Technocracy when the Price System fails, we shall have the kind of social operation which will be worthy of the dignity of the name civilization. If civil commotion and revolution get started, all will be lost; the Vatican and the Kremlin can then squabble over the remains; most of us won't be here to dispute their right.

However, it is most probable that Americans will play America to win; and this is the ultimate paradox considering their present behavior. Technocrats will fight for America and Americans until we have a New America, worthy of our technological progress and the dignity of man.

—John L. Berge, I2247-3

HERE IS THE ANSWER TO THE CURRENT QUESTION

What chances have American youth today? They have the greatest opportunity of the ages, provided they and their 'well wishers' get busy with the job of recruiting and training the 'Technological Army of New America' to learn how to distribute the abundance we have learned to produce.

If this nation continues very much longer under the nominal leadership of the present reflectors of public opinion, America will reach the end of this road in the swamp of mob hysteria.

THE NORTHWEST TECHNOCRAT

Another Glimpse of the Great Conspiracy

ON NOVEMBER 23, Sir Winston Churchill became expansive on the subject of his love for the Germans and, during a moment of oratorical enthusiasm, inadvertently disclosed that he had given orders to his field marshal in Europe, in April, 1945, to make preparations for using the surrendering German soldiers in an Allied attack on the Russian armies. Field Marshal Montgomery, visiting in Washington, confirmed that he had received such an order and that he had obeyed it. Sir Winston at first insisted that this information was old stuff and common knowledge, but under the pressure of criticism was forced to admit to a possible defect of memory. Montgomery, however, was more recalcitrant about submitting to similar 'brainwashing.'

Russian Defeat

Thus, little by little, the details of the Great Conspiracy leak out. Perhaps, one day, the whole story will be told. It is no secret that during the war many high ranking commanders of the West desired a Russian defeat at the hands of the fascists — which probably accounts in large part for the lack of serious restraint that was put on the Germans in their war against Russia. Many events of the war can be adequately explained only on the basis of the Great Conspiracy motif; such, for example, as the secret visits of Hesse to Britain. Such a conspiracy could have been developed only by means of secret collaboration between important agencies of the Western Allies and the Axis Powers, and the Vatican is not to be discounted as the locale of the common meeting ground. Only when it was obvious that the fascist armies would be defeated by the war on the Eastern Front, did the Western Allies hasten to invade Europe and race eastward to accept the surrender of the defeated fascists.

William C. Bullitt, writing from Rome for LIFE magazine in March, 1945, sent out an advance feeler for the Great Conspiracy (evidently to test public opinion), advocating that the Western armies join with the Axis armies and invade Russia as the last phase of World War II. There is much evidence that

this very thing was being given serious consideration in the top echelon camps of the West.

The Conspiracy was defeated because of several factors: Ailing President Roosevelt probably did not exhibit sufficient enthusiasm for it, so it didn't really get going in high gear until after his death. The plot to assassinate Hitler, to remove him from the scene as an obstruction to the acceptance of Germany as an ally by the West, failed. (An earlier plot had successfully removed Mussolini.) The Russian Armies were far too powerful at the moment of their supreme victory. The public, as well as the men in the armed forces of the West, tended to regard Russia as a friend and ally rather than as an enemy. And, finally, the German Wehrmacht was so badly defeated it had no stomach for further war against the Russians.

Some actual fighting between the Russians and Americans did develop around Berlin during the closing days of the war; but the Great Conspiracy failed to take hold at that time. So the arch plotters retired to the rear to prepare provocations for the Cold War which was to follow. Incidentally, it was one of the chief conspirators, Winston Churchill, who released the opening blast in the Cold War with his speech at Fulton, Missouri, in March, 1946

—Techno Critic

Any mob direction of America's destiny on the basis of any horizontal stratification of our social structure would be in conflict with the social destiny of this continent and socially disastrous.

Science, when she has accomplished all her triumphs in her order, will still have to go back, when the time comes, to assist in building up a new creed by which man can live.—James Morley

British Statesman and Author, 1838-1923

THE CORTISONE DISAPPOINTMENT

LONDON, Nov. 13, 1954—The decision of the Nuffield Foundation to stop the grants which it has been making for research into cortisone and A.C.T.H. is a sad comment on 'headline cures'—sad, because the hopes of millions of rheumatism sufferers throughout the world have been raised and disappointed. No blame attaches to the Nuffield Foundation. One of its great beneficial enterprises is the investigation of rheumatism, and that will go on, with most generous endowments.

But the research will be on lines other than those of the cortisone and A.C.T.H., which clinical tests

CONTENTS

No. 178 (Vol. XIX)	January, 1955
	Page
Why It Can't Last	2
Science Is Non-Patriotic	3
Stone Axe to Automation	9
Harness for Six Billion Horses	11
The Paradox of Survival	12
Have You Observed?	13
Developing Thends	14
Polyethylene	17
Environment and the Way of Life	21
Another Glimpse at the Great Conspiracy	25

Editorial Board-----George Kellogg,
Harry Briggs, Ruth Berge
Business Manager-----Rina Corcoran
Circulation Manager-----Lucy L. Barnes

Printed in U.S.A. by volunteer and union
labor on Technocracy's own press.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or association either in America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section. Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses, or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' 'that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every province in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the nearest Technocracy unit.

WHO?

Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanc, teacher, preacher or housewife—so long as you are a patriotic American—you are welcome in Technocracy.

carried out by the Medical Research Council show to have no advantage over aspirin in treatment of most rheumatoid conditions, and which the Foundation now dismisses as 'at best, palliative.'

Two eminent Americans and a Swiss scientist were awarded the Nobel Prize for the work on cortisone and, again, no blame attaches to them; nor does the present experience detract from the importance of their original discovery which has pro-

duced fresh insight into the glandular mechanisms of the body. The blame lies with those newspapers and medical men and high-pressure American public relations agents who jazzed up a piece of fundamental research into a spectacular cure on the limited evidence of cases in which wiser physicians would have recognized the improvement as being no more than euphoric.

Here, as in the case of streptomycin, is ample justification for the Medical Research Council's insistence on cautious and carefully controlled clinical trials before such innovations are made public.

—New Statesman and Nation

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912,
AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND
JULY 2, 1946 (Title 39, United States Code, Section 233)
SHOWING THE OWNERSHIP, MANAGEMENT
AND CIRCULATION OF

THE NORTHWEST TECHNOCRAT, published quarterly at
Seattle, Washington, for January, 1955.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Section 3, R.D. 12247, Technocracy, Inc., 2208-8th Ave., Seattle 1, Wash. Editorial Board: George Kellogg, Ruth Berge, Harry Briggs, 2208-8th Ave., Seattle 1, Wash. Business Manager, Rina Corcoran, 4324 Bagley Ave., Seattle 3, Wash.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Section 3, R.D. 12247, Technocracy Inc., 2208-8th Ave., Seattle 1, Wash.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

RINA CORCORAN, Business Manager

Sworn to and subscribed before me this 7th day of October, 1954.

(Seal)

CLARA J. HUMES

(My commission expires July 25, 1957)

SUBSCRIPTION ORDER

YOUR SUBSCRIPTION EXPIRES
WITH THIS ISSUE

To: The NORTHWEST TECHNOCRAT
2208 8th Ave.
Seattle 1, Wash.

Enclosed herewith is \$.....to cover subscrip-
tion(s) to Technocracy's Magazines (rates listed as
follows):

- ☐ All Three Magazines, 12 months, 12 issues,
\$3.00. (All three publications rotated).
- ☐ THE NORTHWEST TECHNOCRAT, 4
issues, \$1.00; 12 issues, \$3.00. (Quarterly).
- ☐ THE TECHNOCRAT, 4 issues, \$1; 12 is-
sues, \$3.00. (Quarterly).
- ☐ TECHNOCRACY DIGEST, 4 issues, \$1; 12
issues, \$3.00. (Quarterly).
- ☐ This is a new subscription.
- ☐ This is a renewal subscription.

(Canadian orders payable in U. S. funds)

START WITH.....ISSUE

Name.....

Address.....

City..... Zone..... State.....

(or) City..... Province.....

(Foreign rates, other than Canada, Mexico, and U. S.
territories, 20% (50c) additional to above rates.)



PREPARE YOURSELF

If America is faced with abundance and unemployment while converting nine billion kilowatt hours of electrical energy per week, what will happen when in the very near future we have the capacity to convert 20 billion KWH per week? Who will work what hours per day and what days per week, and where will the produce be piled? Why not admit to yourself that there is no solution to this problem under the Price System, and then prepare yourself for the next most probable social state on North America — Technocracy?

THE NORTHWEST

Technocrat

APR. '55

IN THIS ISSUE:

- Total Organization
- A Matter of Perspective
- Peace on Earth
- The Sno-Freighter
- Point of Attack
- The New Way

No. 179 (Vol. XIX)

25¢

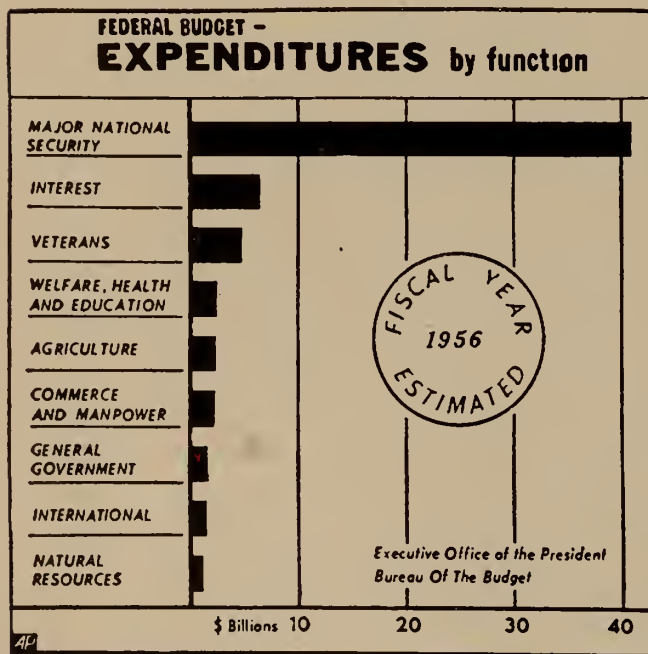
Sec. 3, R. D. 12247
TECHNOCRACY INC.
Seattle, Washington





In Black and White

JUST IN CASE anyone might wonder what happens to his hard-to-come-by lucre, which he pays in taxes, here it is in black and white. Roughly sixty-seven per cent of the federal budget is allocated for 'major national security,' which for all of the talk about it is conspicuous by its absence. All other expenditures are small by comparison, individually, as can be seen readily by the accompanying chart.



In thirty-seven years of either preparing for or waging war against nations we are told are the enemy, from the Huns to the Russians, more than \$400 billions have been spent. At no time have we ever approached obtaining security for this Continent, though such security could have been had long ago for much less than has already been paid.

Not considering the blood which has been spilled and the devastation of vital resources expended for war purposes, the expenditures have given business a feeling of exhilaration and the means to continue to operate.

A perpetual state of war tension is the ideal for the Price System. It excuses huge appropriations for useless military projects like aircraft carriers that are too big to go through the Panama Canal; and defense of bases like Formosa that could not possibly be used to defend this Continent, but could only be used as points from which to launch World War III.

We can have defense and security. But it will mean 'sacrificing' the North American Price System for a reasonable, intelligent social operation by the trained personnel of science in North America—the one and only Technocracy. Things have gotten to the point where we will either 'sacrifice' the Price System, or most assuredly it will sacrifice us.

Editorial Board, NWT

COVER PICTURE

TRACTOR SHOVEL

This all-wheel-drive Tractor Shovel is using extraneous energy in doing work. The days of doing work by the sweat of the brow are numbered. This is only one example of instigating the use of petroleum energy.

Photo courtesy of Clark Equipment Co.

THE NORTHWEST TECHNOCRAT

APRIL 1955

THE NORTHWEST Technocrat

Total Organization

Functional organizations, formed to serve humans needs and wants, are a recognized boon to mankind. When efficiently operated, using the latest power technology, and facilitated with integrated flowlines, functional organizations can provide abundance at very low cost in human effort.

MANY writers, discussing the subject of society and its future, are stymied in their thinking by a morbid fear of a strong social organization, as if there were something intrinsically bad in organization, as such. These fears are not entirely spontaneous, for there is adequate outside stimuli to nourish them. George Orwell and Aldous Huxley have furnished imaginary examples of malignantly pathological social organizations; and history furnishes a number of real organizations which are enough to terrify anyone—Medieval Europe under the Popes, fascist Germany under Hitler, Latin America under the Inquisition, the Middle East under Mohammedanism.

The limitation of the writers is not due to lack of examples to inflame their imaginations but is due, rather, to a limited perspective. They fail to understand the nature of organization and to appreciate the various kinds of organizations. They fail to distinguish between authoritarian organizations and functional organizations. There is a great deal of difference between them.

Let us first consider that the so-called organizations of Medieval Europe, Latin America, Asia, and most others were not organizations of society for any constructive purpose, but rather, they were authoritarian tyrannies imposed upon the people. Little effort was made to organize anything except the administrative regulation of the people, which usually has been based on suppression, exploitation, and terror; and the primary objective was to obtain glory and revenue for

the ruling oligarchies. This applies in principle to the empires of Egypt under the Pharaohs, of Rome under the Caesars, of China under the various dynasties, of northern Asia and eastern Europe under the Khans, and of Europe under a succession of medieval and recent dynasties. The tightest social organizations endemic to the Western Hemisphere were those of the Incas, Aztecs, and Mayas—which were later broken up by the Conquest and supplanted by the Inquisition. The greatest and most extensive of social organizations prior to modern times was that of Kublai Khan, which extended from south China to the borders of Poland. But it was political in structure and soon deteriorated after the death of Kublai Khan as a natural consequence of political corruption and ineptness.

All of the old empires were dependent on slave labor as the primary source of energy and, consequently, were limited in their technological capabilities. This was still a major factor in the fascist reorganization of Europe under Hitler. Any society that must derive most of its energy from human muscles necessarily is tyrannical in nature and has a tendency to place an emphasis upon racial and class distinctions.

The most rigid and totalitarian of organizations in the Western World has been that of the Roman Catholic Church, which has dominated southern Europe and Latin America for centuries and has built strong outposts in other parts of the world. Its ultimate goal is the clerical and spiritual domination of the whole earth. It is an

ecclesiastical tyranny which comes closer to George Orwell's '1984' than any other social organization in existence. Paradoxically, while the Church aggressively promulgates the doctrine of One World Order under Moral Law (Roman Catholic Law, we assume), Catholic writers display a panicky fear of any strong or extensive secular organization, based on the premise that 'totalitarianism' is bad. Among other things, the Church fears the growing power of Soviet Russia and American technology. One of its strategic efforts at this time is to play the one against the other, not without success of a sort.

Dismissal of Fear

We can dismiss the fear of social organization on the part of Catholic writers as an act to misdirect or subvert the supporters of organizations which are competitive with that of the church or, at least, as naivete derived from the closed, narrow pattern of thinking engendered by their way of life. The same dismissal cannot be granted, however, to many other writers who claim to be liberal or independent in their approach. In part, their fear can be explained on the basis of a nostalgic yearning for individual anarchy, particularly among those of recent pioneer ancestry. On this Continent (and elsewhere), where there have been open frontiers and plenty of space, the tendency has been for the governing agencies to let a large measure of anarchy prevail, mainly as a social expedient since regulations can be enforced effectively only in a closed and settled area. Thus, the United States and Canada, along with certain other places on the globe, have recently permitted the individual to have the maximum 'freedom' of action possible in any social area. This freedom consisted of certain dubious privileges, such as: working very hard to wrest a frugal living from nature, the opportunity to overpower and loot weaker neighbors and in turn be overpowered and looted by stronger neighbors, a continual uncertainty about being able to hold onto the gains of the moment, and the probability of dying young and in the prime of life. If successful in his depredations and defense of life and property, the pioneer tended to favor continued anarchy, as exemplified by a laissez faire attitude on the part of the territorial government. But, if he were less successful, he tended to yearn for the coming of Law and Order. The latter were usually in the great majority.

Human beings are by nature gregarious, tending to group together in communities. The solitary

individual is an exceptional and rare occurrence. If it is to be characterized by anything above a mere circumstantial association, the group obviously requires some kind of social organization. Circumstantial associations may be found among even the lowest forms of animal life. A group of beetles under a board would constitute such a 'community.' Although the individuals in an association may appear to be members of a group, each is fully on his own insofar as providing the requirements of life are concerned. A flock of birds would represent a slightly higher form of group life than does a cluster of beetles. Although each bird in the flock has to secure its own food, locate its own roost, and build its own nest (or steal one), the birds do consciously go together as a group, feeding together, roosting together, and on occasion attacking or harassing an enemy together. We cannot say that a flock of birds represents an organization, however, for, apparently there is no designing or execution of group activities and no segregation of functions among different sections of the group.

Not even among the non-primate mammals can we isolate anything that constitutes a social organization. As among birds, there is a tendency to form group associations, but there is little that can be classed as conscious planning and action. In such animals as horses, cattle, seals, and cats, there is a tendency for a male to seek dominance over a harem of females, but even this is on an individualistic anarchic basis. (We shall not discuss the 'well known' phenomenon of wolves hunting their prey in packs, since that does not occur in nature, only in the mental images of human artists and writers. Wolves hunt their prey as solitary individuals or, at most, as a female and a whelp or two. Dogs may hunt in packs, but there is no design to their operations—just mob action.) Two dogs living together may develop a routine of activities that appears to demonstrate intelligent cooperation, but we doubt that a larger number of dogs would be capable among themselves of developing organized and cooperative action patterns.

Little Organized Activity

Even the sub-human primates, including the great apes, offer little in the way of organized activities beyond that of mob action. Family life among monkeys, as well as among other mammals and birds, has a semblance of organized behavior on a small scale; but this is based mostly on instinct rather than on intelligent adaptation. Most of the smart behaviorisms of animals, particularly on the group

level, can be passed off as the artistic license of story tellers. Even when conducted in a mood of honesty and objective realism, observations of animal behavior by amateur naturalists are usually strongly influenced by preconceived notions and become slanted by anthropomorphic interpretations as well as by a conscious appreciation of the dramatic value of the story-telling that is to follow. The scientists who follow through with controlled observations have a lot of mythology to straighten out. But even after that is done and their findings are worked over for the 'enlightenment' of the public by the artists of Hollywood and Life Magazine, the casual reader is still left with a world of myth, albeit a somewhat new, revised edition.

Small Tribal Communities

Earliest man evidently existed in the form of animal aggregations, but eventually became organized into small tribal communities. There must have been a conscious organized effort to provide group protection, to organize hunting parties, and to cooperate on larger construction jobs such as building shelters and bridging rivers. These steps in social organization developed very slowly and intermittently. One reason for the slowness of development among early people was the tendency to freeze any new development into a formula, to be memorized and repeated without variation over and over again. Further, a great deal of time and effort, as well as life, was squandered on organizing and carrying out activities which had nothing but imaginary value; for example, ceremonies to influence fickle gods and demons. These ceremonies also were reduced to fixed formulas and variations were discouraged. The functional formulas, such as those for building a bridge, a dwelling, or a water lift, had to be based upon reality; but the formulas for appeasing the fictional monsters of an imaginary realm had no such restraint placed upon them. Human sacrifices became routine procedure. Later, in a much more highly organized and slightly less rigid society, we find the phenomenon of a Cheops expending the major part of his life as well as a great part of the energies and resources of the whole society to prepare for his personal entrance into a mythical heaven.

As social organizations became enlarged into nations with innumerable new complexities, physical problems arose which exceeded the scope of the old, primitive formulas; and these had to be met with improvised expediences. Consequently, an opening was made for human ingenuity to exercise

MY TWO CENTS WORTH

I see where the men in Congress voted themselves a big raise so they can live like gentlemen instead of like ordinary people. It seems to me they was already getting an awful lot of money just for being congressmen. I have been reading where Mr. Eisenhower's crowd is supposed to be a give-away administration, taking everything they can from the people and giving it to foreigners and big business. But I guess that ain't necessarily so, because it looks like they expect to keep some of it for themselves. It seems to me the way people fight to get into Congress there must be something in it for them that most of us don't know about.

Our poor postman who works harder than any congressman ever thought of working gets so little from the government he has to wear patched clothes. But Congress doesn't give him any raise. That just goes to show what I have suspicioned all along, that Congress is against working people and only for those who sit in big soft chairs and swindle their income from the people. I don't like to work myself and I wouldn't if I didn't have to. But I don't like to see sleek 'gentlemen' sitting around on their fannies all the time smoking big cigars and trying to scheme up ways of swindling the people who do work.

Sometimes I wonder if I talk too much, because I see where they have some women in Congress too and I might want to get elected there myself some day. Maybe I would like mink coats and diamonds as well as the next woman, only I hate to think of the kind of person I would have to be to get them. Anyway I do know if I ever want to get elected to Congress I've got to stop talking so much about the common people the way I do, at least until after I get nominated and start asking them to vote for me.

— IMA MORON

its talent, with the result that major projects were organized and designed to fit prevailing circumstances. Unfortunately, most of these projects dealt with conducting conquests for the acquisition of ter-

ritory, slaves, and loot to enhance the glory of the political and priestly rulers. Only sporadically was a major project—such as an irrigation project or a road—undertaken to enhance the general welfare. Even then (as now) it probably had to be justified as a contribution to the 'national defense.'

Fear of Strong Organization

It is not entirely without reason that conservative, peace-loving people developed an intuitive fear of large, strong organizations. For it usually meant that the people either would be conscripted into slave-like work battalions to help achieve the objectives of the organization or, if it were an enemy organization, they would be overrun and either slaughtered or enslaved by it. Thus, whether society was organized for military conquest, for the building of a pyramid in Egypt or Yucatan, a Temple of Solomon in Palestine, the Great Wall of China, or any one of the numerous palaces, cathedrals, or fortresses of Europe, the common people knew that it would come out of their 'sweat and blood and tears.'

During the so-called civilized period of human existence on the earth, the past 7000 years or so, there have been frequent if not continuous large scale social problems facing the administrators; and many of these were without precedent. Searching the records for old formulas proved futile (although it is still indulged in by many social mentors); for, either the situations were new or the magnitude had grown. For example, formulas for building boats for transportation on rivers and in small bays and lagoons had to be revised when the problem involved crossing the Mediterranean, and revised again when it came to crossing the open oceans. Overland transportation had to be organized; in the case of commercial caravans, to provide sufficient strength to ward off marauders; in the case of military marches, to move an effective army of men and supplies over long distances in a short time. The Golden Horde of Genghis Khan could advance 90 miles over strange territory during the night and be ready to attack a city at dawn. Under Kublai Khan, a man of endurance could travel as much as 800 miles in a week by horseback. Much earlier, the armies of Julius Caesar learned to build a pontoon bridge across a river in a matter of hours.

Thus, as the magnitude of operations increased, new problems arose and new or revised solutions for them had to be found. This called for designing, planning, and organization. The objectives of the

major organizations were usually political, military, religious, or commercial, but more often in combination than singly. Whatever were the motives and whoever were the instigators of the organizations, the physical, functional aspects had to be designed and carried out by engineers and technicians—usually in the capacity of higher class slaves.

Large scale social organizations of the past were unwieldy and impractical because of the huge numbers of human toilers required to man them and the complicated supply problems entailed; also because of the prevalence of epidemic diseases for which no successful remedies were known. It was only with the coming of science and power technology that gigantic organized endeavors could be considered.

The greater organizations of the past were primarily of two sorts, politico-military or ecclesiastical. Neither of these contributed anything constructive to the general welfare of humanity.

Third Type

A third type of organization, those organized as commercial enterprises, were usually small-scale, particularly where physical (as contrasted with purely financial) activities were involved. These enterprises operated at a slow rate, largely because of the amount of human toil involved and the inadequate modes of transportation for supplies and produce. Trade and transportation were further handicapped by the prevalence of hi-jackers, both on land and sea. It was not until after the first Industrial Revolution that commercial enterprise began to be organized on a large scale.

Commercial enterprise and its organizations had one distinct virtue not found in the political and ecclesiastical organizations. It dealt with physical phenomena, and it had to sell its products to customers who had an opportunity to test the wares they bought. Whatever may be the motives behind a commercial enterprise, it must provide goods and services which are acceptable to its customers; and, in that respect, it performs a useful function.

Commercial enterprise organizations have plenty of faults. Their chief virtue is that they are built on a physical base which is intrinsically useful. The faults are mainly these: The primary objective of a commercial organization is to provide profits for its owners; the criterion of success is the Balance Sheet. Whether the business produces profits or suffers deficits determines if it shall continue in operation, not whether it serves the public welfare. The de-

mand for continuous profits introduces many operating features into commercial enterprises that are to be deplored by the consumers, among them: the production of shoddy goods and the introduction of frequent changes in style for a more rapid turnover in sales; an emphasis on art and shine rather than on functional performance; a maximum markup in price; and the use of obnoxious sales promotion techniques. There is also the factor of wastage of resources and contempt for long-term conservation. Quick and easy profits have precedence over every other consideration.

The United States has led the world in the development of commercial organizations based on physical production. It has developed a telephone organization that covers the Continent and extends into many other parts of the world. It has a steel industry capable of making more than 100 million tons a year. It has an automobile industry capable of turning out more than 10 million automobiles a year. It can produce innumerable gadgets by the tens of millions per year; and its capacity to produce bulk processed materials is fantastic. America's greatest weakness is in its transportation. It has no Continentwide railway system; no adequate system of super-highways; practically no internal waterways system and only a mediocre external waterway transport. (Airway transport is too costly to be considered for general purposes.) The best organized transportation on this Continent deals with the import and dispersal of petroleum and its major products, including the use of pipelines.

Organization Mandatory

Organization of society, in whole or in part, is mandatory if any large-scale endeavor is to be considered. It is obvious that organized transportation systems are better for a society than no transportation system; that communication systems—mail, telegraph, telephone, radio, television—serve useful purposes; that organized industrial production provides many more goods, at lower cost and of higher quality, than could unorganized household economies. Functional organizations, formed to serve human needs and wants, are a recognized boon to mankind. When efficiently operated, using the latest power technology, and facilitated with integrated flowlines, functional organizations can provide abundance at very low cost in human effort. One would have to possess a warped perspective to see nothing but evil in such organization; or one would have to see in functional organization a powerful

competitor to one's own non-functional organizational aspirations.

If man is to do anything above the level of individual self-sufficiency or unregulated mob action, it must be planned and organized. Everything else being in order, the larger the organization the greater can be the accomplishment. There is no functional reason why North America should have more than one telephone system, or more than one automobile manufacturing organization, or more than one aspirin producer. We have only one postal service and, in spite of the political, commercial, and moralistic interferences involved, it is fairly efficient and reliable.

Trouble Caused by Smallness

The worst troubles connected with America's industrial and service organizations lie, not in their hugeness, but rather, in their smallness and competitive disunity. The basic needs of the people could be much better served if there were fewer and larger organizations and less competition.

The important thing about an organization is the purpose for which it is organized. Production and service organizations, as we have already indicated, serve a useful and desirable function. But there are other purposes that are of dubious worth.

The business organizations that ride on the back of the functional organizations, pulling the reins and regulating their operations, counting profits above human welfare, are unnecessary and costly burdens on any society. The financial organizations, in the strict sense, do not even have the pretense of a serviceable function at their base. Thus, banking, insurance, stock dealing, and trustee or holding organizations are parasitic in their operations and detrimental in their over-all effects.

Political organizations are gory with wars and plunders; and they stifle individual and social welfare with their taxations, their internecine rivalries, and their administrative incompetence. Political organizations are highly inefficient and wasteful in their operations; they are very costly to maintain; and, for the most part, they are destructive in their approach to social problems rather than constructive. Political rivalries, often leading to wars—international and civil—are always a social hazard of the first magnitude. It is the behavior of political organizations, as much as anything, which has generated the prevailing fear of organizations as such, particularly large ones. Yet, through the centuries, political organizations have, as a side effect, provided a certain degree of law and order and formu-

lized human rights; and this has probably been preferable to certain other alternatives of the time.

The main rival of political organization has been the priestcraft organizations. These have competed with the political organizations for revenue and for control over the lives of the people. The two have usually compromised their conflict into a compatible merger or at least a *modus vivendi*. Only recently has there been a quasi separation of Church and State.

We see, then, that the truly mischievous organizations are those based upon Authority, wherein an individual or an oligarchy has the power—spiritual, political, military, or economic—to demand obedience of the people, regardless of whether the organization serves their welfare or harms them. Sometimes this obedience is achieved through the threat of, and liberal use of, the whip, the dungeon cell, the torture chamber, and the executioner's block. Sometimes, it is enforced through threats to withdraw certain rights and privileges, such as loss of citizenship, confiscation of property along with deportation or relocation, loss of opportunity to earn a living or excommunication. Sometimes it is brought about by cultivated social ostracism and public scorn for the 'slackers' and defaulters. Among the more recent devices are threats of a Committee Investigation, public listing on a roster of 'suspects,' or public complaints and possibly private harassment via some super-patriotic organization such as the American Legion, the Catholic League of Decency, or the D.A.R. And there are even more subtle ways; for example, do you dare to refuse to shell out to the Red Cross, the Community Chest, or the March of Dollars (not Dimes, you piker)?

The Only Beneficial Organization

The only organizations that serve a beneficial purpose for the people (we are speaking strictly in the secular sense, now) are those which build and operate some physical mechanism to provide goods and services to the people. Industrial and service organizations have done much to enhance the general welfare of the people of North America (and elsewhere), providing them with more of life's necessities and comforts with less personal efforts than they ever enjoyed before. This is done in spite of the gross corruptness of politics and greed of business as well as complaints from those who believe in earthly poverty and travail (for others, not themselves).

It stands to reason that, if the corruption and interference were removed from the functional organizations—that is, the effects of politics and business, including wars, litigations, and stalemates—the welfare of the people would be advanced far above the wildest promises of politicians at election time or prophesies of business enthusiasts at a promotion banquet. The public welfare demands that politics and business enterprise be abandoned altogether—they serve ABSOLUTELY no useful function. Also, it demands that religious organizations be restrained from protruding into secular affairs—that they limit their functions to spiritual worship and to moral and ethical advice and critique.

A Continental Organization

Technocracy, concerning itself only with the secular welfare of North Americans, has designed a Continental Organization for this Area—a single organization to design and operate all production and service functions on the Continent, and which would be composed of every citizen of the Continent. This organization would correct the wasteful competition, duplication, and squandering of natural resources inherent in the present Price System. It would abolish the parasitism of politics and business, and it would provide the most for the least expenditure of time and effort on the part of the people. Among the side effects would be the elimination of all incentives and motives for wars originating from this Continent, almost all crime of man against man, and all fears and worries arising out of the threat of economic insecurity. This is not a mere promise; it is the projection of a critical analysis of the situation pertaining to North America in terms of the potential capacities. Technocracy is not a reform movement; it is the redesign and reorganization of a continent. It is a social organization to supersede and replace all other social organizations concerned with the secular affairs of North America.

The total organization of North America on a functional basis is in no way to be confused with fictional descriptions of highly technological social organizations, such as, for example, that pitiful work of Kurt Vonegut entitled 'Player Piano.' Such treatises appear never to be able to divorce function from politics, business enterprise, and moralism; nor can they clear themselves of the muck of social stratification. Technocracy is designed to advance to the highest material level the standard of living

(Turn to Page 27)

A Matter of Perspective

The only way to deal with fascism and the problem of social change in North America is to meet them with a direct approach. Fascism attempts to put the individual on the defensive. Attacking fascism with facts to expose it is the only effective way to handle the problem.

SINCE shortly after the close of the fighting of World War II, the citizens of the United States have been the objects of an assault upon their intellects which has no historical parallel. A mixture of subtle and crude propaganda designed to elicit hatred and fear has spewed from the press, radio, television and the pulpit. Among the more intelligent individuals, a cringing fear has developed which, at this moment, has all but rendered them sterile as a guiding force for social change. That is precisely what the propaganda was intended to accomplish. More than 150 million Americans are not the concern of the propaganda machine. It's the ten million of the population, more or less, who are born with enough intelligence not to agree with everything they hear and read who the propagandists are after, with no holds barred.

The professional liars of the Price System, which includes just about everyone in politics, business and public relations, who have access to the public ear, pulled a very old trick of politics on Americans, and it is a disgrace to the nation that so many have been sucked in by it. Many intelligent individuals have been victimized by the old jesuitical trick wherein one accuses the other guy of doing that which he wishes to do himself. Thus, fear of communism is generated to disguise the encroachment of fascism.

Confronted with overwhelming reactionary propaganda, those people who have a natural capacity for discriminating thought and can weigh and analyze information have tended to withdraw from conflict with propaganda distortions and blatant lies. They have found themselves to be in defense of progress without a method of attaining the objective; in short, they have occupied an indefensible position because it does not support a specific strategic goal, and they are not organized. Then, fear of economic and judicial retaliation against the non-conformist have caused them to sacrifice their intellectual integrity. It is the price they pay for not knowing what they are talking about.

Undoubtedly, many of the more perceptive individuals have felt that the current hysteria about

communism eventually would lessen and perhaps die out altogether. Then conditions would become more conducive to self-expression about the social situation of the U. S. In the interim period, the best course of action is to keep one's mouth shut. Such reasoning shows a fundamental lack of knowledge of the social and physical problem bearing upon the North American Continent. It also shows lack of appreciation of the nature of the enemy of intelligence.

One must regard the propaganda program of the Price System as a long range effort to bring about a demoralization of the citizenry of this Continent, and to forge absolute conformism in social behavior. It is the cherished hope of native fascism that the more intelligent citizens of this area will not coalesce into an organized movement for social change. Therefore, the major error—which can be costly enough to destroy this civilization, if not a good part of the world—is to 'lie low,' entertaining the possibility that tomorrow, rather than today, may be more opportune to challenge the increasing threat of fascism with positive action to stop its growth, and to go on with the task of building a decent civilization.

The jarring conclusion, which a study of the problem before North America reveals, is that this continent is not destined to go through a succession of political changes in the future like other countries of history. Gradual change through time is not on the side of intelligence. But intelligence has the distinct advantages of understanding and ability to use superior technique, provided that no more time is lost in bringing the problem of living in a technological society into proper perspective and doing something about it.

The human being has never been able to produce much of anything with his hands alone—not even destruction. In his tortuous progress through millions of years, man has developed superior ability to learn, perhaps as a compensation for his general weakness in other respects when compared to other animals. The combination of his head and his hands produced techniques to protect himself

against hazards of his environment, and to make living more tolerable. After a long period of fractional progress in which plants and animals were domesticated, crude machinery consisting mostly of the wheel, levers and pulleys made its appearance, followed by power-driven machines to do work. These are elementary things we all know, but the historical significance of the arrival of extraneous energy consuming devices to perform toil formerly done by human and other animal effort is not widely appreciated, save for the fact that humans were relieved of some arduous toil.

When the elemental beginnings of technology were transplanted from the Old World to the New, a compounding growth of this new social ingredient was to take place which was to find man's general understanding of the overall social effects of technology lagging far behind his ingenuity in producing and applying it. The curious and dangerous state of affairs in the world today revolves around the focal point of the conflict between technical progress and the continued adherence to ancient concepts of social control which continuing progress cannot tolerate. Superstition, ignorance and cupidity have made technology potentially as dangerous to human existence as it is beneficial.

A Great Irony

Throughout its history, until recent years, America furnished inspiration and leadership for the world because of its spectacular social progress. A people who were receptive to new ideas proved to the world that the human creature did not have to be tyrannized and terrorized by political and religious tyrants. History demonstrates that American esprit de corps and sweeping industrial advances were instrumental in causing millions upon millions of people in almost every part of the world to begin to break their chains of superstition and ignorance. A great irony of this age is the fact that Americans have allowed themselves to become victims of political tyranny, while they permit their tyrants to brandish weapons of mass destruction over the heads of people who once regarded Americans as benefactors and friends.

How has the present incredible situation developed? It's mainly a matter of national objective. America is fresh out of one. So its political and business leadership has turned to exploiting the public fear of communism. To the everlasting disgrace of America, the leadership of this most powerful industrial entity on the face of the earth has

acknowledged ideological defeat through an expression of fear of communism.

Once, Americans had an objective—to settle the vast land area in which they reside, and to build an industrial empire. America lived pretty much within itself until the turn of the twentieth century. Then technology began to exert increasing pressure on the Price System, as improving methods of production turned out an ever higher rate of flow of goods and services. Congestion due to lack of purchasing power began to pose serious problems for the Price System, which can only operate with the rules of scarcity. American business and politics, not content with getting far more credit than they deserved for U. S. industrial progress, persisted in control of the economy without bringing about modifications to compensate for steadily rising productivity, naturally correlated to technological advances.

Attention turned outward to world markets and problems. Inevitably, this was to lead into a series of international involvements and wars which proved to be completely senseless and unnecessary. The cardinal point is that slick war propaganda repeatedly has appealed to the emotions of the American public with the objective being only to preserve the Price System. War is good business. It destroys large amounts of goods from which business makes profits. It stimulates the growth of industry. Those are the objectives of war. The issues over which the war is fought are not important. If it were not for war in the past half century, America long since would have been forced to discard the Price System, simply because it could not have distributed goods fast enough, with its encumbering price tags, to avoid industrial stagnation.

Seal of Death

But war has not solved the problem of the Price System. It has merely made the day of reckoning more drastic. The accumulated debt liabilities, near exhaustion of some vital resources through appalling waste, and the vast expansion of industrial capacity, particularly, have put the seal of death on the Price System of this Continent.

'Preserve' has the connotation of keeping intact something which has ceased to exist in viable form. Years ago, before giant corporations gained control of the economy, many endowed with a disposition to chisel their fellow men had an opportunity to practice their talents. But that day is gone forever. And in that period, one might even criticize politics

of the day without much more of a reprimand than a dirty look, provided that he didn't try to organize effective opposition. That day, too, is gone, as proponents of the Price System act as undertakers to embalm and enshrine the system with the political methods of fascism.

An essential function of fascism is to manufacture hatred and fear. There must be an object to which public attention can be directed. Hitler rose to power by fomenting hatred of the Jews. Fascism in the United States grows by grinding out propaganda of hate and fear of Russia. Fascism must preach and praise the virtues of business enterprise and 'divine guidance' as occurred in Germany under Hitler, and which is now happening in the U. S. The object is to create a propaganda juggernaut to steamroller opposition, while it functions to get the multitudes to bleating like sheep in its defense.

The only way to deal with fascism, and the problem of social change in North America, is to meet them with a direct approach. Fascism attempts to put the individual on the defensive. Attacking fascism with facts to expose it, in other words, turning the 'heat' on the accuser, is the only effective way to handle the problem. For example, Technocracy points out that American business and politics have allied themselves with Roman Catholic fascism, an international and supranational force of subversion well practiced in the arts of Inquisition and intimidation, which now is the fountain head of a calculated effort to produce and sustain hysteria in the United States. This alien force has sought to make a big threat out of the communists in the U. S., which by Eisenhower's admission constitutes only one sixty-fourth of one per cent of the total population. Here is the real political threat, Catholic fascism, with its cruel history of converting or killing the dissenter.

When one analyzes the problem of social change in North America, there is no use trying to run away from it. A chain reaction of events has been set in motion which cannot be stopped, and which sooner or later will be felt by every North American. Automation, the industrial production process which requires no human toil, will disemploy millions of workers in the next few years. If nothing else, dire necessity will force public action for a new method of social operation. The forthright, intelligent thing to do is to meet the problem with organized action, not let it run over you. Fight for a future now, or there won't be any worth having.

Through these past few years of lush Price System prosperity, years of crazy paradoxes and contradictions, of war and hysteria, of lavish debt creation

and lavish spending, the Membership of Technocracy has maintained its Organization throughout North America, while every other movement worth mentioning has compromised itself out of existence, at least as an effective movement. Technocracy has withstood everything in ridicule and hatred that the Price System can throw at it, which includes not only barrages from the liberals and the fascists, but those from the communists and socialists as well. People continually are surprised to discover that Technocracy is alive and moving. They wonder how Technocracy has escaped the Inquisition.

More than twenty years ago, Technocracy issued its first statements to the general public, declaring the technological nature of America's problem and emphatically rejecting politics in any form as the solution. Thus, at the outset Technocracy was relieved of the burden of any future political involvement. Technocracy was then in a position to take a swipe at all factions which sought to undermine the destiny of technological social operation and abundance for all citizens of North America.

Technocracy began to build an Organization to present its program in 1934. Citizens not affiliated with politics are considered for membership. This type of Organization has attracted the kind of individual needed to build a stable and determined membership. These are some of the reasons that today Technocracy survives. It is no credit to American intelligence that many more citizens of this Continent have not caught on and done something about Technocracy, namely, joining it and getting to work.

Fear and worry do not provide answers to any problem. Always, these reactions are the result of ignorance. Action is the answer—action to study and understand Technocracy. Make a decision that shows intelligence. Join Technocracy today. After all, there isn't much else to do—unless you want to wait for events to make the decision for you.

—12247-1

JOB PROBLEM

The year-end brought warnings of rising unemployment levels in 1955 from two organizations which seldom see eye-to-eye, the National Planning Association and the United States Chamber of Commerce. Both find the economy recovering, expect bigger production in the year—but both also feel that the production rises will not be great enough to offset the growth of the labor force and the rapid rise in output per worker. Result. Higher unemployment levels.

They differ as to the remedy. The Chamber calls on government and private industry to "meet the challenge" by providing greater incentives to expansion.

—Bank Bulletin

PEACE ON EARTH

THROUGHOUT the past ages of man, numerous wars have been fought, under a large variety of colors and for numerous pretexts. Holy wars have been fought to protect Good from Evil, with loot as an incidental side motivation. Many patriotic and impressed soldiers have died on the fields of battle under the leadership of generals who were either heroes or villains, depending on which side they happened to be, and on whether they won or lost the battle. On the victorious side, the leader is proclaimed to be a hero and liberator; and, in time, if the cause for which he fought still survives, he may become a sort of savior. The leader of the vanquished side is usually denounced as a villain, an outlaw, and is often summarily executed. In more recent times, when the generalship of wars became a gentleman's profession, the tendency has been to accord the vanquished general an asylum in keeping with his status as a Gentleman.

Today, whatever the pretext, wars are usually fought to seize ownership or control of property and channels of trade. The stubbornness with which the aggressor and the defender fight over the property rights often results in terrific destruction of lives and property, destroying works of man that took many years to build. Scarcely does the smoke of battle clear away before commercial opportunists of the winning side infiltrate into the domain of the vanquished. In the name of business enterprise, they seek choice privileges for the exploitation of resources and investment in the more profitable industries. The military forces of the winning side usually occupy the vanquished territory long enough to ensure that its own entrepreneurs become firmly established in the domain of the losing side. We need not look beyond Germany, Italy, Japan, and South Korea for verification of this principle.

The businessmen of the winning side may, and usually do, form alliances with the established businessmen of the occupied territory, partly out of respect for other successful members of the business fraternity, partly to uphold the status of Gentlemen on the commercial front as it is similarly respected and upheld on the political and military fronts, and

partly to facilitate the looting and enslavement of the local population. In any event, at least among Western nations, the objective is to maintain an economic stranglehold on the people the same as before, but to re-allocate the profits, this being the primary purpose for which the war was instigated and fought in the first place.

Whatever may be the Gentlemen's Agreement among the economic leaders of both sides, and however the profits may be re-allocated, the lowly citizen of the vanquished side usually finds himself dispossessed and impoverished, or at least heavily burdened with the indemnities of the war. It is his destiny to provide the muscle power, the economic sacrifices, and the obedience in the reconstruction of the economy. It is the commercial enterprises that are first reconstituted and last of all the comforts of the common citizens. He is goaded to labor in a servile manner by economic stringencies, by commands of bosses and overseers, and by lack of opportunity to choose otherwise.

After the mood of defeatism begins to recede, there is a general willingness to gather up the pieces and start over; and there are many who would like to build better than what they had before. But they soon find themselves handicapped and restrained by commercial enterprise. A major part of the national endeavor must go to pay tribute to the conqueror and to start the profits flowing for those who have succeeded to the ownership of investment values. Many struggling enterprises cannot succeed, because they cannot obtain needed materials, find markets for their products, or obtain credit; and this means that they will go bankrupt, or at least have to shut down. Economic hardships result for the employees and other dependents on these enterprises. Some of those, who once had much, find themselves possessing nothing, and, shunned socially, they become one with the poor and dispossessed.

If one does not possess wealth or hold debt claims against his fellowmen, he is unable to maintain a front; and the respect he receives from his neighbors depends on how much of a front he is able to main-

tain. Thus, people are classified, regimented, and suppressed in accordance with their economic status. All of the talents and facilities of the economic enterprisers are directed toward maintaining an economic stranglehold on the people, depriving them of freedom of action and demanding of them obedient servitude. This is often done in adroit and subtle ways, not always through direct economic exploitation. It may take the form of fine print in contracts or the pernicious form of percentage corruptions, such as interest payments, depreciation of values, and profit margins.

It is interesting to observe that, as one lays a snare to entrap the naive, the gullible, and the poor, he is also laying a web in which he may be caught himself. The little chiseler, thus, becomes the prey of larger chiselers, and these in turn are prey for still greater pirates of the enterprise system.

People have come to recognize debts held against others as wealth. Thus one of the most respected citizens of the community may be he who trades in other peoples' debts. In olden times, a rich man's wealth consisted of the cities and castles, the farmland and servants he could claim title to. Today, a rich man's wealth more often lies in his power to create debt against others faster than they can create debt against him. Consequently, a person may be rich and respected yet own no physical property, only paper certificates of debt—claims which he holds against others.

Government Operation

The wealth of a government resides in its power to levy taxes against the people it is supposed to serve. As business propositions, most governments are failures; that is, they cannot pay their own way. They have to be subsidized by the people through tax payments and other revenue or they will go broke. Of course, the leaders in government claim they provide services to the people which compensate them for the taxes they pay, such services as defense, protection, and keeping the peace. These are so intangible that the people have no way of checking up on them to see if they are getting as much in return as they pay for. All they know is that the politicians spend most of their time figuring out ways and means of collecting more taxes, lavishing money on plush expense accounts, passing laws to restrict other peoples' activities—and now and then they wage war.

The real wealth of a nation lies in its land, its resources, its factories and machines, and in its scien-

tists and other trained people. The wealth of the near future may be counted in terms of the nation's automatic factories, its sources of extraneous energy, and the technologists who know how to design the factories and utilize the resources and energy beneficially for human betterment.

Long ago, one of the principle items of wealth was the number of slaves that a nation could capture and hold. The more slaves, the more work it was possible to get done. So a major preoccupation of the armed forces, as well as privateers, was the capturing of men, women, and children for sale as slaves—along with seeking treasure chests of gold, silver, and jewels. But piracy and slave-trading is nearly done—even animal power is on its way out—as extraneous energy takes over the work of farms and factories. The tractor has sent the horses and mules to the processing plants to be made into soap and dog food. The automatic factory has abolished slavery and is fast abolishing human employment as well.

Which Will He Choose?

Technology has laid down a pattern for abundant living and has released human beings to live leisurely and comfortable lives, free of vermin, disease, poverty, and toil. This is the future that man has always wanted; and, now, it is here for him. Will he accept it?

Or will he seek 'Peace on Earth' in another manner?

Under the dominance of small-minded politicians, commercial enterprisers, and dealers in debt, there is a possibility—a probability, as it now appears—that nations will continue to fight wars 'to end all wars.' And in the next war, if it is ever fought, this goal may be reached.

It has been estimated soberly that in the next war, fought with atomic and thermonuclear bombs and rockets, there may be fifteen to thirty million casualties the first day. In the panic and frenzy of such a war, what is to prevent the two sides from seeking to launch ever more destructive rockets at each other, even though it lies within the realm of probability that all life, at least all human life, on the earth will be destroyed?

With the surface of the earth barren and scorched, with some areas turned to sheets of glass and the rest dangerously radioactive—and no sign of life—the war to end all wars will have been fought. And there will be Peace on Earth forever.

—F. C. Glenn, MAL

DEVELOPING TRENDS

JOB-DISTRESSED AREAS CALL U. S. PLAN FAILURE

WASHINGTON—The Congressional Joint Economic Committee heard graphic accounts recently of the hardship in the nation's "distressed" areas and industries, up to and including accounts of starving children.

An angry barrage of testimony poured out from representatives of coal-mining areas, the entire state of West Virginia, the farm-equipment centers of Illinois, Detroit (with more distress anticipated later this year), and the New England region generally. Two government witnesses explained what the Federal government is trying to do about the problem, but they conceded that it was not much so far.

Several of the witnesses termed the government's program a "runaround" and "no help at all." And they emphasized that solution of their problems was a matter for national, not local, action.

Says Children Suffer

Possibly the most depressing picture was painted by Leo Fishman, professor of economics at the University of West Virginia. After describing the extent of unemployment in the state—possibly the worst in the nation, stemming in large part from coal troubles—he went on to say, in effect, that the state government is broke and has had to cut down welfare payments at the time of worst need. For many people the only public welfare assistance available is the Federal program of handing out surplus food, but in twenty-five West Virginia counties there isn't any machinery for distributing this food.

"Social workers report that the physical growth of many children is being stunted and their personalities warped," Mr. Fishman said. "In some instances death is being hastened because of the inadequacies of the public assistance program."

Douglas Fraser, administrative assistant to C. I. O. president Walter P. Reuther, said that the automobile industry is doing now exactly what led to the distress in Detroit in late 1953 and most of 1954—namely, producing far too many cars in the early months of the year. He said that at the current rate of production, 72 per cent of the total anticipated production for the year will be used up by the end of June, and forecast heavy layoffs in the last half of the year.

About the only remedial measure all the witnesses agreed upon was a federalizing of the unemployment compensation system with a sharp increase in both amount and duration of benefits. A move to do just that was defeated in both House and Senate last year, and is opposed by the Eisenhower administration.

Plea for New England

The other suggestions varied according to the problems of the individual industry concerned. Harvard economics professor Seymour Harris, speaking for New England as a whole, bitterly opposed what he described as government measures which have the effect of assisting the South in its competitive battle with New England for industry. This position was seconded by Arthur G. McDowell, A. F. L. expert on industry migration.

Solomon Barkin, chief economist for the C. I. O. Textile Workers, attacked government programs as inadequate and severely criticized the President's economic report for not going into the problem of his and other distressed industries. Mr. Barkin said the textile problem is not only in New England but is "north, south, east and west." He cited figures showing that 236 mills have shut down in New England, 287 in the middle Atlantic states, and 117 in the South.

Lester Thomas of the United Mine Workers, talking about the severe trouble in both hard and soft-coal mining areas of Pennsylvania, recommended a "national fuels policy" which should include severe restrictions on imports of residual fuel oil, chiefly from Venezuela. Surprisingly, however, Mr. Fishman—despite his recognition of the crucial importance of coal to West Virginia—did not make this recommendation. He said, in fact, that it must be recognized, "that no program to aid the bituminous coal industry is likely to improve the employment situation materially."

The witnesses all agreed that the government's program of attempting to divert defense contracts to distressed areas had been of little or no help. Robert C. Goodwin, director of the Labor Department's Bureau of Employment Security, conceded that the program "has not resulted in the redirection of a large volume of contracts."

—New York Herald Tribune

—Investigation will show that the foregoing is a definite trend and not an isolated instance.

REUTHER ASKS REMEDIAL STUDY OF AUTOMATION

WASHINGTON, Feb. 10—Walter P. Reuther, C. I. O. president, asked Congress today to study "the economic and social implications of automation" and to seek ways of averting the unemployment he said it might bring.

Reuther made the request in telling the Senate-House Committee on the Economic Report that the Eisenhower administration has "failed to indicate how the nation's tremendous potential for growth can be utilized to sustain full employment."

Automation is the term used to describe the growing use of complex machinery, much of it guided through intricate processes by electronic devices and capable of turning out complete units in a single operation.

Reuther said that automation "makes possible the automatic office, as well as the automatic factory, with the likelihood that entire plants, office or departments in much of industry and commerce will be operated by electronic-control mechanisms within the coming decade or two."

—Associated Press

—Their headline mentioning remedial study must mean the Technocracy Study Course, because there is no other remedy for automation than Technocracy. (We know better than this—anyone with such a good racket would never ask that the facts be known. What Reuther is after, if he acts true to type, is some method of perpetuating his racket in spite of automation.)

THE NORTHWEST TECHNOCRAT

FARMERS WARNED BY BRITISH ENVOY

The American farmer, whose surplus products have piled up to a record \$6,627,000,000, was warned that over-anxiety to dispose of food abroad could have serious effects on international relations.

Sir Roger Makins, British Ambassador to the United States, told the convention of the Farm Bureau Federation here that some of this country's salesmanship measures tended to restrict free trade and thus to upset the trade balance.

Sir Roger, who also stressed the importance of a free flow of trade, said some of the procedures for disposing of United States farm surpluses abroad were causing concern among friendly nations. He mentioned specifically export subsidies, restrictions on imports of agricultural products and the new Public Law 480 adopted by the last Congress, under which the United States Government is negotiating with various foreign nations for the sale abroad of surplus commodities against payments in local currency.

The British Ambassador declared that the United States could do much toward winning to the side of the free world those countries of the East that "are not yet quite sure where their interests lie." He said this could be done by helping such countries to establish a firm foreign trade and productive system.

—New York Times

—Howard Scott, Director-in-Chief of Technocracy Inc., has recommended that the dirtiest trick we could pull on the Russians would be to export a million U. S. businessmen to Russia—that would do more damage than anything else we could do!

THE VOICE OF FASCISM

PARADISE, N. S. (Canadian Press)—Stocky, bald, 59-year-old Otto Strasser—who is in Canada awaiting the passport that will take him back to Germany—says "fight is wonderful: tension is wonderful." The 'tonic effect' of tension is one of the pet theories of the man who helped Hitler and nazism to power in Europe's troubled 1920s . . . He criticizes the recent appeal for peace by President Eisenhower. "Peace is nothing. If Eisenhower wants peace let him shoot himself."

Ideas swim about in Strasser's head like fish in an aquarium. The biggest one is his goal of becoming West Germany's new leader . . . His brother Bernard, a Roman Catholic benedictine monk now teaching in Primrose, Nebraska, and some followers, contribute to his upkeep . . . "We're on the eve of a very joyous world," the German predicts. "But now, people are obsessed by fear—everybody's afraid of the atom bomb. It is idiotic. Death by an atom bomb would be an ideal one."

—Eat, drink, and be merry, folks; for, tomorrow you may die—if certain pious gentlemen can succeed in arranging it!

LONGVIEW FACES TRANSIT DILEMMA

Longview, Washington, faces the problem of operating its own bus service or doing without public transportation.

George Ruth, president of the privately owned Longview Public Service Co., told the City Council the firm is preparing to discontinue service. He said it has recorded no earnings since 1947 as the passenger load has diminished, and union employees are demanding a wage increase.

Ruth asked the city to purchase the company's 11 buses and necessary operating equipment.

—United Press

TRANSIT CRISIS CALLED ACUTE

Transit in the New York-New Jersey metropolitan area is on the brink of catastrophe, according to Charles H. Tuttle, chairman of the Metropolitan Rapid Transit Commission.

He called for a \$1,000,000 transit study and scientific plan for the whole metropolitan area.

"The transit crisis," Mr. Tuttle said, "has reached the brink where debate must be replaced by action, and profession by decision."

—New York World Telegram

—Technocracy has pointed out that we are neglecting public transport in favor of private transportation which is dependent upon continued supplies of petroleum. This petroleum does not exist in the quantities required for the long term. A sudden curtailment of supply could mean paralysis of the entire economy.

IMPROVED SOLAR BATTERY OF 8% RATED EFFICIENCY

An improved model of the Bell solar battery, one-third more efficient than the original in converting sunlight into electricity, was announced by Bell Telephone Laboratories, Inc.

When the device was unveiled in April, the scientists who developed it rated its efficiency at 6%. That is, of all the energy coming to it from sunlight, 6% was converted into electricity.

Now Bell scientists have come up with a new battery with 8% efficiency, which they say is comparable to the operating efficiency of steam and gasoline engines.

On theoretical grounds the maximum possible efficiency at which the battery can produce current is estimated at 22%, and the men who developed it see a good prospect of reaching 10% to 15% in time.

Meanwhile the present 8% rating, according to Gerald L. Pearson, one of the co-inventors, "is 10 to 15 times better than the best photovoltaic devices available." Such devices are used in photographers' light-meters.

The basic part of the battery is a thin wafer of specially treated silicon, which generates electricity when sunlight falls on it. Linked together electrically like any other type of battery, the cells in the improved battery will deliver power from the sun at the rate of 80 watts per square yard of surface.

Some of the energy is lost by reflection from the silicon surface and by absorption in the cell itself. Increased efficiency has been obtained by reducing those losses, Mr. Pearson said. The theoretical 22% limit of efficiency is due to the fact that the cell reacts to only a part of the solar spectrum.

While the battery is still in the laboratory stage, the Bell System plans ultimately to use it for communication purposes where power requirements are small. One proposal is to have sun-powered battery chargers, operating continuously while the sun is shining, for amplifier stations on telephone lines.

Associated with Mr. Pearson in developing the solar battery were Calvin S. Fuller and Daryl M. Chapin, with help from many others.

—The Wall Street Journal

(Turn to Next Page)

HOW FREE ENTERPRISE OPERATES

The Navy has just purchased an amazing new radar tube which may revolutionize the television industry and also contribute to the safety of air travel.

Developed by Ross Aiken, a student of Dr. Scott Lawrence of California Tech, the new radar tube is about 1½ inches thick instead of the bulky 24-inch tube used in present day TV sets. The present tube is what makes television so big. The new Aiken tube, however, is so small that it can be hung on the wall, and future TV sets will probably resemble a picture in your living room.

Because of the size of current radar, only the largest airplanes have the space to carry them. The Navy, however, has awarded contracts to install the new tubes in jet fighters. And because of the reduced size, future airplanes will now be able to carry three radars—one so the pilot can tell what's above him, one so he can tell what's below, and another to tell what's in front during night flying or foggy weather.

One interesting aspect of the new radar tube is what it will do to Adlai Stevenson's new client, the Radio Corp. of America, now the defendant in one antitrust suit brought by the government, plus another brought by Zenith Radio on the ground that RCA charges an unreasonable royalty on its patents, thereby eliminating competition.

The Signal Corps, during the years 1932-1936, developed the then revolutionary ability to look into space through radar. Later, William D. Hershberger, a Signal Corps civilian who had worked on radar, resigned and turned up on the payroll of RCA. Following this, on Jan. 11, 1938, RCA filed for the basic patent on radar, listing as inventors William D. Hershberger and I. Wolf, a laboratory man for RCA.

The Army was amazed. Immediately it moved with the Patent Office to keep the precious secret from becoming public, which it was able to do.

However, the Army could not stop RCA patents in foreign countries, and RCA proceeded to take out patents in Australia, New Zealand, Germany, Japan. This was in 1938, the year Hitler seized Czechoslovakia and when most newsmen were predicting war was inevitable. Shortly thereafter, World War II was on, with America's most valued secret in the hands of the enemy.

After the war, the Army consulted with the Patent Office and the Justice Department about bringing a suit against RCA. Suddenly, however, the Army cooled off.

Simultaneously, the head of the Signal Corps, Gen. Harry Ingles, retired on March 31, 1947, later became president of RCA Communications, Inc. Starting salary \$30,000.

After that, the Army began to alibi for RCA and the criminal aspect of the suit was dropped. However, the Justice Department under Truman readied a civil suit under the Sherman Anti-trust Act, but never filed it. Assistant Attorney General Graham Morison attempted to file, but it was blocked by superiors. Later, under the Eisenhower administration, Assistant Attorney General Stanley Barnes insisted the case proceed. It has.

That is part of the rather large mouthful Adlai Stevenson has bitten off for himself by defending RCA, and why some of his friends believe he will not run again.

—Newark Star Ledger

U. S. FOREIGN AID ON POWER SCORED

PORTLAND, Oregon—Foreign aid programs for reclamation and electric power development drew censure here in the light of drastic cuts for similar projects in this country.

C. Petrus Peterson of Lincoln, Neb., president of the National Reclamation Association, declared that almost as

many American dollars were being spent for these projects in some thirty foreign nations in a seven-year period as had been the outlays for similar projects in the United States since the Reclamation Act was passed in 1902.

Opening the association's annual convention, which brought together members from seventeen Western states, Mr. Peterson, a former Nebraska State Senator, put the total cost of foreign reclamation and electric installations built with American aid funds for only five years through June 30, 1953, at \$1,729,123,000.

This he compared with \$2,400,000,000 spent on our own reclamation and power program for the period from 1902. The sums to be added for 1954 and 1955 in foreign spending, he said, would bring the foreign and domestic totals quite close together.

Mr. Peterson reported that appropriations for construction and rehabilitation in the reclamation and hydroelectric power fields had declined 65 per cent last year from more than \$334,000,000 in the fiscal year 1950. He said that the current fiscal year, with the help of a supplemental appropriation, was "a shade better with \$133,757,000 but still down over 60 per cent."

"Whatever justification existed at the end of the world war to help other people get to their feet economically and at the same time increase our national expenditures to astronomical figures to provide adequate defense..." he said, "it would seem to be appropriate now to reappraise these programs and seek a balance that will permit a stable, progressive and forward-looking program for our own resources development."

Douglas McKay, secretary of the interior, called attention to work now under way looking to formulation of a national water policy. **If a successful policy could be written it would represent the greatest contribution by the Eisenhower Administration to the nation,** he said.

He said that in the Pacific Northwest States, local government agencies and private interests were ready to spend an estimated \$2,000,000,000 for the development and control of the water resources of the Columbia River Basin.

The Secretary cited these fundamental conflicts of viewpoint that had to be resolved:

"We have the flood control-minded who would release, as rapidly as possible after a flood, most of the water stored back of the dam to save the space for future flood protection.

"We have the irrigation-minded, who believe that no water should be released, even for hydroelectric power, except in the irrigation season or unless the supply is surplus for the foreseeable future.

"We have the power-minded, who believe that Government hydroelectric plants should operate at any cost and in any event, regardless of the effect upon other water users.

"We have the Fish and Wildlife people, the National Park people and other groups which are opposed to any tampering with areas where recreational facilities, fishing, boating, or scenic beauty will be disturbed."

—The New York Times

—Here is an example of planning from the bottom up with decisions being effected by which special interests can exert the most influence. Technocracy's plan for a continental hydrological system is a plan which begins with the large perspective so that the benefit of the whole population is the first consideration. Surprisingly, these small special interest groups would in most cases be better satisfied with Technocracy's design.



THE SNO-FREIGHTER

THE WORLD'S largest vehicle on rubber tires—a truck so big it will carry ten freight vans piggy-back—will soon be doing just that across frozen snow trails of inland Alaska. Dubbed the LeTourneau Sno-Freighter by its Longview, Texas, manufacturer, R. G. LeTourneau, Inc., the 274-foot transporter is so long it had to be coupled together in six sections in order to turn a corner.

The giant cargo carrier will cross Arctic snows on 24 huge rubber tires, each one so big it wouldn't roll through the door to your house. The tires are mounted on 24 LeTourneau Electric Wheels which provide each section, or car, with driving power independent of the others.

A routine run for the Sno-Freighter will be like a movie voyage through outer space in every detail except rocket speed. Dressed for protection against 50-below-zero Arctic temperature, the crew will look more like flying saucer pilots than hard-working truck drivers. They will board a metal car that contains living accommodations, control station, power

plants, and fuel supply all inside one hull—like a movie rocket ship—and will set out across landscapes as devoid of life and movement as the astral beyond. Alaska Freight Lines, Inc., purchaser of the Sno-Freighter, will use it to provide an overland freight link between areas normally isolated for part of the year by winter cold and snow.

The Sno-Freighter consists of a power-control car and five cargo cars, each with a load capacity of 25 tons. Individual cars can be uncoupled for loading and unloading. Diesel-electric generating sets on the power-control car supply electric power to the 24 LeTourneau Electric Wheels which actually drive the vehicle. In this new system for delivering driving power, each wheel has an electric motor and gear reduction inside its rim. Low-pressure tires, 88 inches in diameter and 38 inches wide, are mounted on the wheels for traction and flotation over snow and frozen surfaces.

The entire Sno-Freighter was designed and built in six weeks in order for operational tests to be



Each cargo car on the Sno-Freighter has a payload rating of 25 tons. Oak decks are 16 feet, 4 inches wide by 40 feet long and are 8½ feet off the ground so that streams may be forded without endangering cargo.

Powerful drive wheels at 23-foot intervals along the entire length of the Sno-Freighter propel it along like a huge mechanical centipede. Electric motors and gear reductions inside the rim of every wheel receive power through flexible electric cables from the power-control car at the head of the vehicle.

made over actual freight routes before the frozen Alaska rivers begin to thaw. R. G. LeTourneau, Inc., who recently completed development of a rubber-tired, trackless train for use in desert areas and tested an exploratory 'Sno-Buggy' on the Greenland Ice Cap, called on their experience with these machines to meet the weather and production deadline.

Although sleeping accommodations are provided in the power-control car for a four-man crew, only one operator is required at the controls. The operator only has to concern himself with steering the Sno-Freighter's two front wheels. Each following segment of the vehicle will automatically track the car immediately ahead of it. The power control car, which leads the freighter, contains the control station. The car is insulated against Arctic cold and its double-walled windows are tinted to reduce the glare of snow-reflected sun rays.

For protection of cargo and engines while fording streams or traveling through brushy country, the Sno-Freighter's decks are 8½ feet off the ground. All cars are water-proofed up to a height of six feet. Except for its high beds, the Sno-Freighter's appearance is much like that of a diesel locomotive and train of flat cars. Actual dimensions are: length, 274 feet; width, 16 feet, 4 inches; height, 17 feet, 6 inches. The highest point is the operator's cab at the front of the power control car.

Requirements for operation in the Arctic cold and over the frozen Alaska surfaces were established



Photos courtesy R. G. LeTourneau, Inc.

in conferences between LeTourneau engineers and officials of Alaska Freight Lines. Some of the 'cold weather features' incorporated on the Sno-Freighter are: (1) Extra wide-base tires for flotation over snow; (2) Aluminum construction wherever practicable to reduce weight; (3) Thermostatic control of ventilation to the engines; (4) Custom preparation of lubricants to avoid congealing in extreme cold; (5) Natural rubber for electric cable insulation and oil seals to maintain pliability in Arctic temperatures; (6) Lever-operated disconnects on electric junctions for uncoupling cars without exposing hands to the weather.

Despite terrain conditions and the Sno-Freighter's massive construction, it maintains load stability at all times. Over rough surfaces the car couplings and wheels rock and gyrate with every change of topography, but beds of the cars move along with only slight undulations. This load stability is

(Turn to Page 27)

Point of Attack

MINORS are always welcomed in Technocracy, but they are not accepted as members of the Organization without the written consent of their parents. Parents sometimes are reluctant to give that consent and intelligent young people suffer from frustration because various inhibitions make it difficult for their parents to disregard old superstitions, beliefs, or conditionings. However, it frequently works the other way, and intelligent parents readily accept the new and broader outlook their children have acquired through contact with more modern thinking. It is, of course, a happy state of affairs when parents can advance with their children.

One common reaction to the situation, that of the person who assumes that there is something about Technocracy that is in conflict with religion, was expressed by the mother of a certain young college sophomore recently. This girl, 19 years old and a brilliant mathematician who is majoring in engineering, was most anxious to join Technocracy when her older brother, a new Member, got her interested in it. But the mother objected, saying she thought that, if we would all live according to the principles and teachings of Christianity, we wouldn't need Technocracy. The girl's response was, 'I agree with you wholeheartedly, Mother, But just what is your point of attack?' The mother said, 'Well, if you're going to put it like that, I guess there isn't much I can say.'

We have never heard any proposition stated more concisely: 'What is your point of attack?' Any average American today knows that there is something radically wrong with the state of our society. No one can remain unaware of the creaking and grinding in the wheels of our social mechanism as the flowlines of distribution become clogged with the apparent surpluses of goods. All the ordinary approaches to the problem have failed dismally and the condition continues to worsen as the surpluses pile up in storage while our purchasing power becomes more and more inadequate.

Let us consider some of these methods of attacking the problem, starting with the one indicated

above, the moralistic approach. After two thousand years, it is being demonstrated more forcefully than ever that merely inculcating high ideals cannot succeed if at the same time we continue to operate in ways that make it impossible to practice the things we preach. For instance, the so-called 'baser qualities' of greed and selfishness, to which a great many people attribute our difficulties, can hardly be condemned when it is through the exercise of such characteristics that men and women achieve what is known and honored today as 'success.' Actually a certain degree of greed and selfishness is necessary for survival in the Price System: these very human characteristics are not the cause of the condition we face but are the result of it.

America's basic problem is not one of human characteristics. It is a problem that is unique in all man's history on this earth: it is the problem of how to handle physical abundance for the benefit of the entire people. After struggling for many thousands of years, and after having achieved abundance here on North America, we seem unable to accept the fact of our arrival in that blissful state. We have arrived in a land where it would now be possible to practice most of the virtues the moralists would like us to practice, but we insist on retaining the old operational forms and traditions which make it impossible to do so. Looming large amongst the restrictive influences is our insistence on retaining political controls, when the new era of technology dictates a new order of scientific functional control.

This is another point of common resistance, by parents, to Technocracy's non-political program. We have had most conclusive evidence that politics cannot solve the basic problem—else things would be improving instead of deteriorating steadily. The political approach is just as futile as the moralistic one. (This is proved by the fact that we can no longer have both peace and prosperity at the same time.) We can and do change political administrations, but that still does not alter the basic physical factors of our present society. We go to the polls and vote, yes. But for what? For politicians to hold public office (thus solving some of their problems

but not society's). Do we have any say when it comes to making really important decisions? We do not: they are made, in most cases, by individual men **appointed** by the politicians we only elect. For instance, are we allowed the privilege of using the surplus commodities that have been bought with our tax money and stored away, or even of helping to determine how they shall be disposed of? Page Ezra Taft Benson! Rather, we continue to pay out huge sums for rent on storage space for those commodities, amounting at present to some half million dollars a day! Did we have any say about going to war in Korea? Ask Mr. Truman. Well, all these things are but a part of the political approach. Nothing is accomplished: the physical problem remains unsolved.

A Joker

In all this there is a joker involved and we are the victims, the more or less willing dupes. We have let the politicians and diplomats pull the wool over our eyes by trying to convince us that when they lead us into war it is only with the highest aims—to 'free' certain foreign peoples from 'aggression'—and that their own motives are as pure as said wool. Too late, we learn that the politicians and diplomats, in cahoots with big business, whose envoys they are, are also concerned with a purely physical problem, a personal problem. Example: They got us into a war with Korea, a small nation possessed of vast but generally unsuspected physical resources. The problem was, ostensibly, to keep those resources under their control so they could not be exploited by the 'terrible communists' behind the 'iron curtain'; to save those resources for the 'free world.' Well, let's examine some of the physical factors involved in the Korean 'police action.' We quote data for the most part based on official E.C.A. releases and testimony by Marshall Plan officials before Senate Appropriations Committee, June, 1950:

One of the world's largest sources of tungsten ore is the Sangdong deposit in South Korea, its entire production going to **American companies free** for the next five years.

North Korea has the richest iron and gold deposits in Asia. Syngman Rhee has promised rights in all Korean mines (most of which are in the North) to **Wall Street's Oriental Consolidated Mining Company**.

The New Korea Company (in which Dulles is highly interested) owns most of the industry and 50 per cent of the farm lands of South

Korea, and has paper claims to rich assets in the North.

Two thousand two hundred industrial, transport, and banking projects, formerly Japanese-owned, are vested in the Rhee Syndicate and are all optioned to **American investors**.

In any language that constitutes a physical proposition, doesn't it? Korean resources represented a very definite and physical 'plum pudding,' and our diplomats knew just where to 'stick in a thumb.' Commenting on the above facts, Technocratic Trend-events had this to say: 'History books are bulging with blatant catch phrases as the causes of war: national integrity, sovereign rights, crusades for this and that, succor for the downtrodden. Actually the causes boil down to conquest and loot, with the VIP's (very important people) of the victorious side latching onto the loot. Then the concept of property rights is supposed to extend the conquest into infinity.'

Well, we fell for it, to our almost immeasurable cost; but to their great chagrin, the diplomats and politicians were foiled that time. But, they are still trying, and it remains to be seen whether they can yet get us involved in a real war in Asia, or whether the fast-developing social trends will decide the issue otherwise.

Lack of Understanding

There is still a woeful lack of understanding of the fundamental social pattern which underlies these involvements abroad and also the increasing threat of disruption at home. As we stated above, most people have become at least vaguely aware that something is wrong, but like the mother of the girl sophomore, they have no 'point of attack.' They can only leave it to the politicians who themselves have created the situation.

The increasing disruption at home has led more recently to another type of attack which is primarily an emotional one. One example of this is the recent publication of a book, 'The Court of Last Resort,' by Erle Stanley Gardner, author of many of the most popular 'whodunits,' an attorney and a recognized authority on the subject of crime and criminal prosecution. Although its style is direct and forceful, the book presents a definitely emotional appeal to the general public in an attempt to correct a particular phase of social injustice by securing the release of certain people who have been wrongfully imprisoned for crimes which they did not commit.

With Argosy Magazine donating its pages for publicity, Gardner organized a group of well-known

crime experts. These men are spending a great deal of their own time and money traveling all over the country to secure new evidence in cases brought to their attention by the general public as a result of the Argosy articles. They have done some very spectacular work and in doing so have brought to light many glaring faults in our system of criminal jurisprudence. The book presents these conditions very frankly and outlines possible procedures for their correction.

Doubtless this emotional 'attack' will result in some worthwhile reforms. However, these will be only reforms and they cannot accomplish the correction of the basic causes of crime. In other words, with the best intentions in the world these men are merely treating the symptoms but doing nothing at all toward curing the disease itself. Crime is such an integral and intrinsic part of society today that it can be cured only by the elimination of the Price System which breeds it.

Bombardment by Appeals

The public is being bombarded by many other emotional appeals today, each purporting to be necessary in order to 'save' a particular group or situation—the March of Dimes for polio; Christmas seals for TB; the cancer campaign; the heart fund drive, etc., etc.—but, fundamentally, each one being conducted to raise funds to support its own 'business' of providing research and cures. The very fact that such a course is a necessary 'point of attack' condemns the system. Without the price element society would, today, have all the personnel and facilities to do a far more efficient job of protecting and improving the public health.

The same is true in the field of education. The current emotional appeals for 'interest' in the public schools cannot accomplish the solution for a condition which calls for the best brains of competent engineers and the unhindered provision of the physical facilities for carrying on the education of our youth. Given the essential basic reconstruction, society would soon provide an ample supply of qualified teachers.

Technocracy proposes a 'point of attack' which should engage the attention and the unqualified support of anyone who is in his right mind. It is the scientific attack, a method which must of necessity be divorced entirely from all ecclesiastical, political, and financial entanglements and interferences. Moreover, Technocracy also provides a design of operation to implement the attack, a design which,

though apparently hard-boiled and materialistic, actually provides for the erection of the physical mechanism for accomplishing nine-tenths or more of the very ideals the moralists, philosophers and religionists claim to be trying to promote. This is not a baseless statement: it is subject to very definite proof. For one thing, as has previously been stated many times, Technocracy would remove the mortgage from the outside and the collection plate from the inside of the churches, thus freeing them to go on to higher considerations.

At a recent Technocracy lecture in Seattle, the speaker was asked, 'If Technocracy is such a good thing, why don't the churches go in for it?' The answer was, 'That's what we'd like to know. Here is a program that would actually bring to pass most of the things they have been preaching about for two thousand years, but they just aren't interested. We can't understand it either.'

Nor can we understand why the moralists are content to go along on the old losing basis of merely trying to reform criminals individually, when it is now possible, by changing our mode of social operation, to **eliminate crime and stop producing criminals**. Crime is an inevitable result of Price System operation, at least 95 per cent of it being directly traceable to money considerations, and the rest more or less indirectly so. Crime and the other social phases mentioned, are problems for society as a whole; problems that can be solved only by concerted action directed toward correcting the basic physical factors for which we are all collectively responsible. Such action calls for organization and competent leadership, and Technocracy Inc. is the only Organization established and operating to accomplish that specific purpose. It presents a definite challenge to the fundamental sincerity of the philosophers and the 'do-gooders' and the genuineness of their concern for the general welfare.

—Lucy L. Barnes, 12247-3

GIANT SHOVEL DWARFS OTHERS

PITTSBURGH—A giant coal-stripping shovel—as high as a 12-story building and believed to be the biggest land vehicle in the world—is being built for the Hanna Coal Company division of Pittsburgh Consolidation Coal Company.

Engineers estimate it will be 100 times as large as the power shovels seen on neighborhood building projects.

The whole unit, to be built by Marion Power Shovel Company of Marion, Ohio, will be 50 per cent larger than any existing equipment of its kind. It will be powered by 16 motors using a total of 4500 horsepower.

—Associated Press

Have You Observed?

...**OCCASIONALLY**, an individual prominent in world affairs voices a desire to be remembered benevolently in history. Churchill, who contributed generously to the present tension between the U. S. and U. S. S. R. with his declaration of the Cold War at Fulton, Missouri, in 1946, frequently in recent times has voiced aspirations to become the great reconciler of the touchy relationships he helped to create. General Douglas MacArthur, who was personally determined to transform the Korean police action into a Third World War a couple of years ago, recently stated, 'Could I have but a line a century hence crediting a contribution to the advance of peace, I would gladly yield every honor which has been accorded me by war.' These old men would like to think that they are capable of doing a decent thing for the human race for which they might receive some degree of immortality. Or, in the case of General MacArthur, is he motivated by ambitions for the Presidency in 1956? In any case, history will remember these two individuals and many more like them for their vicious outlook on social problems.

...**THE CURRENT** well organized campaign to feature the United States as a Christian nation is cause for genuine concern. George Washington, at the time of launching of the U. S. as a nation, asserted strongly that it was not founded upon principles of Christianity or any other religious belief, but that it was founded upon the principle of the separation of church and state. In the past few years, the national trend toward paying official homage to Christianity, particularly, has reached such proportions that those who refuse to participate are suspected of being disloyal to the country. Along with abundance and security from birth to death, Technocracy will guarantee every citizen the privilege of believing as he sees fit. No pressure will be brought to bear upon anyone to believe anything.

...**FOR A NATION** on such a 'piety' binge, we have the worst record in history for crime. The F.B.I. reports crime in 1953 was up six per cent over 1952,

with a new high of an estimated 2,159,080 major crimes. This cannot be accredited entirely to population increase, since the population increased only five per cent while crime increased about twenty per cent, in the period considered—1950 to 1953. It is interesting to note that the number of crimes dropped to the lowest ebb in the 1937-1953 period in 1943 when, during World War II, employment was most plentiful.

...**IS THERE REALLY** any difference between being held up with a price tag, or being held up with a gun? Crime is a \$20 billion a year business. Ninety-five per cent of crime is committed out of need or want. As long as there is scarcity of goods, crime will continue. The Price System makes criminals. Given a continuation of the present rate of increase of crime, the F.B.I. reports that crime may become uncontrollable within five years. In reality, crime as we recognize it commonly is nothing more than an extension of business practices. The political system we use functions primarily as the referee and operates with a set of rules and regulations to enforce a line of demarcation in the public consciousness. Crime cannot be eliminated as long as the Price System is allowed to operate. There is only one way to eliminate crime: that is to supplant the present social system with a scientific social control. The only one yet devised is Technocracy. The problem of crime is only one good reason why Technocracy must become a reality soon.

Harry Briggs, 12247-1

OLDSTER BOOM

While forecasters have been weighing the effects of the nation's "baby boom," an equally important population shift is occurring at the opposite end of the age cycle: The number of old people is increasing steadily.

Accordingly, a "built-in" demand may be foreseen in coming years from these two groups who will only consume and not produce. However, it should be noted that this will place a financial burden on the group of working age, particularly in regard to local taxes for services and facilities. The nation's school systems, for example, are already badly overcrowded.

—Bank Bulletin

THE NORTHWEST TECHNOCRAT

THE NEW WAY

An executive who could not carry out the functions of his office would be similar to a plug in a bottleneck and increasing pressure would quickly dislodge such a plug. Functional Control is the New Way—a truly superior social idea which is the functional coordination of all industry and sequences for the physical benefit of all North American citizens.

THE WRITER who aims at wide reader appeal today usually refers to the way we govern ourselves in America as being the 'best' possible. Any deviation from 'Our Way' must necessarily be less 'good'; and if deviation is wide enough, one can with assurance come right out and say, 'it's no good.'

People who attend universities usually get at least an exposure to social science. One of the first new words learned in such study is the word **ethnocentrism** which means 'to judge other groups by the value standards of one's own group.' For instance, 'The Chinese must be outrageous barbarians—eating with chopsticks.' Would you think it too unusual if you heard an American tourist in Asia indignantly demanding a knife and fork? How would you react if you overheard an Asian visitor request firmly to be given chopsticks to use in, say, a restaurant in Kansas City? This kind of analysis is useful in being able to appreciate the viewpoints of other persons and peoples. College people profess tolerance of other peoples as part of their stage play of intellectualism, but usually they still think 'Our Way is best.' Apparently then, this tolerance is merely a disguise for the fact that they haven't as yet really learned anything on this score!

It is correct to say that we have the highest standard of living in the world, but can we say that this is because of 'Our Way' of regulating our affairs?

The North American continent has roughly half of the world's natural resources, half of the world's technology, and three-fourths of the world's technicians (we shall have to lower this last figure soon, if Russia continues to educate technicians at an increasing rate). And North America has only one-tenth of the world's population to support. It begins to appear, possibly, that 'Our Way' is not responsible after all for our highest standard of living, and we have been mistaken unless we can show that 'Our Way' somehow gave us this rich land to live in, built the technology, trained the technicians and controlled the population level; for it is these factors, these physical factors which gives us our American Way, isn't it?

Certainly it must be conceded that private enterprise with no other consideration than profit has developed America to the point it has reached. (A couple of exceptions are the big hydro-electric power developments and the atomic projects which are too big for private enterprise to build.) Possibly the continent was settled and industrialized faster because of an enterprise free to destroy as it wished in order to get a profit more quickly. Some people will hold forth that North America could have been industrialized and populated as well or better by using cooperative methods. Technocracy cannot settle this question although we point out that cut-throat competition has been terrifically destructive; forests razed, streams polluted, land made into immense dust bowls, and our mineral heritage wastefully looted.

However, it has been abundantly clear since about 1933 that this reckless waste of both America and her human occupants need continue no longer. At that time research had been concluded by some of the best known men in science and engineering who had functioned together in a research group for over a decade. The conclusion was inescapable that purchasing power could not keep up with production, and that a total failure of our economy would occur sometime before we reach the point where we convert energy at the rate of 200,000 kilogram calories per person every day.

The amount of energy that the whole economy uses and its effect is somewhat analogous to a steady heat applied to the bottom of a kettle of water. A physicist measuring the temperature of the water with a thermometer could determine that the temperature was increasing and from experience could predict that it would soon boil. Someone else observing this water and not being experienced with thermometers and such might say, 'the water looks no different than it did when we first began to apply the heat, therefore, that water just isn't going to bubble and give off vapor like you say!' In our analogy, the heat under the kettle corresponds to the energy being poured into the economy. This energy comes from hydro-electric dams,

from coal being used, from oil being consumed. The reason that the total amount of energy converted is significant is because machines use this energy in the production of almost all of our goods. The total energy converted is a convenient and basic measurement like a measure of the heat being applied to the kettle. Now, the more machines (and energy), we use the more we displace man hours from industry; and this means that we produce more and more using less and less man-hours. This is important because our purchasing power is based on man-hours. Purchasing power has gone up, true; but production has climbed faster. At the time when production began to get ahead of purchasing power sufficiently to cause serious trouble in the economy, the Federal government began to give money to those people and groups who must have it in order that the system can contrive to function. Put on a graph these trends tell a very interesting story; we can see that various forms of relief, WPA, subsidy, plowing under, were and are increasingly employed to fill the ever widening gap between purchasing power and production. The year 1939 saw the beginning of another form of relief-war! During the war we really got debt going skyward, and prosperity was ours! After the war came the defense economy, and then Korea and then more defense with up to 70 per cent of the Federal budget being allocated to defense (to be spent in areas feeling the pinch most). But the condition is getting worse, indeed it is compounding; it would seem that the size of war needed now to get rid of all this production must be nothing short of total.

At present, despite all the invented employment for our production facilities making war goods, we are witnessing a sinking of the economy under the weight of a terrific production of consumer goods accomplished by better machines which use less and less man-hours, but more and more energy.

Bitter Embarrassment?

So . . . we've been unquestionably ethnocentric in our dealings with other peoples of the world; and to top it all off it appears that we of all people in the world are least intelligent when it comes to dealing with the factors in our own social operation. We have been guilty of expounding on the virtues of an economic system which was a compound of ideas imported from Europe in the first place and which will shortly embarrass us before the world by refusing to function at all.

So you see, whether we like it or not, we do not actually have a choice. We are going to be forced

to give up this method of social control and institute another which will function.

Social control is that function which maintains order and tranquility in the society.⁴ When this control is based on politics, it takes on the nature of regimentation and authoritarian dictatorship. It is then an interference control, rather than a functional control. There is a social control, however, that is not political. We see a functional control all about us, so it need not be strange to us; yet, some of us do not realize that it exists. In industry, on construction jobs, in transportation and in communication, we observe it at work. The telephone company is perhaps the best example of this control that comes to mind; it operates a tremendously complex mechanism with a minimum of difficulty. Generally speaking, the chief engineer of the telephone system gets and keeps his position on the basis of his abilities to function as an engineer and administrator. No one would want to be bothered by voting for him; most of us do not even know who he is; we would instead prefer to let his fitness be tested by whether or not our telephone is operative when we want it to be.

Society's Governors

We look upon some savage people as being extremely stupid and uneducated because they allow a fat old chief and a 'goofy' old medicine man to make them pay tribute and do their bidding—but how about us? Above the chief engineer of the telephone system is the financial superstructure composed of people who are interested in the ownership of and the profit from the telephone facility. It simply does not matter to them whether your telephone operates or not just as long as you pay your bill, while the chief engineer and his technicians do not care if you never pay—their job is to keep your telephone operating.

If we had to vote in order to choose the chief engineer of the telephone system, we could easily end up with an incompetent like Senator Knowland or Vice-President Nixon in the position. A bull in a china shop would be a ballet dancer in comparison to the monstrous ineptitude of a politician operating a technological complex.

We can pick up our telephone and within a very few minutes be conversing with someone at another telephone almost anywhere on the continent and we can get the bill later. Here is an example of a complex technological system which functions in a manner that is clearly not compatible with the interference of the Price System. The technician is fulfilling

his function when he renders his service to society, but the waiting for the quarters to fall in a pay slot or the determination of who will pay are impediments to the satisfactory execution of his specified function.

A natural question about functional control is the concern about checks and balances. We have been taught a severe lesson by history, namely not to trust a person to be 'good' when placed in a position of power and privilege. But a government of function does not trust people to be 'good'; it provides a set of operating specifications which are determined by the job to be done.

Function Is Prime

The opportunity to exhibit the personal qualities which would cause an executive to be called a figurehead or a tyrant are simply 'designed out' in a Technocracy. In vertical alignment, lack of ability to perform is conspicuous from both above and below. An executive who could not carry out the functions of his office would be similar to a plug in a bottleneck and increasing pressure would quickly dislodge such a plug. So here we have in functional control, the **New Way**—a truly superior social idea; the functional co-ordination of all industry and services for the physical benefit of all North American citizens. It is the most efficient method of getting a job done, and this government of the future will be concerned by its very nature, almost exclusively, with the rendering of goods and services to the citizens of this continent, and not with the 'manufacture' of interferences and restrictions as is the case today. This is not anarchy; it is merely the long sought after freedom that we talk of so much. (Through a fluke of politics recently, British Columbia found itself without a provincial government for a period of about six weeks. People did not stop living; in fact, one could not tell by looking that there was anything lacking—there wasn't anything lacking that was needed.) Why should we have laws which are not necessary? A very minimum of restriction will be needed because we have an abundance here in America. People simply do not steal from a free lunch counter! The prime function of the government will be to provide what is wanted, where it is wanted and when it is wanted, and to keep a continuous inventory so that replacement of all the goods can be accomplished at a steady rate—a technological distribution of abundance! The right to share in the consumption of the abundance made possible by the great array of technology is given to every North

American as his birthright; thus man has finally arrived at the place where he can enjoy universal economic security from birth until death. At present the distribution of an abundance to all citizens is possible only in America.

The reader may be thinking that this is too good to be true, 'surely they've forgotten something.' Always in man's experience the worse 'gypping' has been preceded by a big build-up with a hidden 'gimmick.' And just when a fellow gets to trusting that now, finally, he's going to get some place, then 'wham,' and the 'con-man' reaps his reward. This is the way of the Price System; all advertising contains its hidden 'gimmick'; when you are forced by the system to live off your fellow man, you can't be forthright, can you? We are trained to be wary of being used as a 'sucker,' so Technocrats do not mind people keeping their guard up when talking over such revolutionary and startling ideas; rather we request that everyone subject the information received from Technocracy to an analysis of his own. An interested skeptical person having gone over the problem with the criterion in mind provided by science will have a better understanding of the problem and a clearer idea of what must be done.

Initiative

One might suspect that neglecting to consider initiative is a hidden gimmick, so let's consider this for a moment. It is usual to confuse initiative and incentive. Initiative is the quality in an organism which makes it start something; a person with lots of initiative is the one who begins to act when others with less initiative do not act. Incentive is that external thing which is the goal or the promised reward—the thing toward which we strive. Do we have clear-cut examples today of initiative and incentive? The incentives of most people today begin to look more like compulsions derived from the fight for bare survival, if we look closely, or are the cheap tinsel which by endless repetition are made to seem worthwhile goals. Some examples of this last are the automobiles and houses, the appliances and the clothing that are advertised into acceptance as ideal social achievements.

And initiative? In the Price System, a display of initiative is most easily expressed in some form of predation. Where else can initiative be directed? Oh yes, a person might work hard and become a great engineer maybe, but there is a time when it must be apparent to the engineering student that his skill cannot be utilized ideally, but must be prostituted to first satisfy the demands of the Price Sys-

tem—indeed some engineers are employed sabotaging products so that they will wear out faster—a normal Price System practice. Also the only employment available to many people today is the designing and building of the implements of war.

A Technocracy is no wild imagining; it is a blueprint for the rearrangement of the things we already have, into a sensible organization—sensible and understandable, that is, to people whose interest is in a form of government wherein the approach of one person to another will be without thought of predatory or economic consideration and wherein citizens can regard physical problems realistically and act accordingly.

We are at present not merely ethnocentric; we are without question, as a nation, following a course that is clearly paranoid. 'Our Way' is the way of hallucination, of delusion and disillusion. 'Our Way'

CONTENTS

No. 179 (Vol. XIX)

April, 1955

	Page
In Black and White	2
Total Organization	3
A Matter of Perspective	9
Peace on Earth	12
Developing Trends	14
The Sno-Freighter	17
Point of Attack	19
Have You Observed?	22
The New Way	23

Editorial Board.....George Kellogg,
Harry Briggs, Ruth Berge
Business Manager.....Rina Corcoran
Circulation Manager.....Lucy L. Barnes

Printed in U.S.A. by volunteer and union
labor on Technocracy's own press.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or association either in America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section. Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses, or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' 'that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every province in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the nearest Technocracy unit.

WHO?

Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—so long as you are a patriotic American—you are welcome in Technocracy.

is the way of following assorted misanthropes and megalomaniacs during a time of total danger.

'For security in America' as Howard Scott has stated, 'for a world peace which only an integrated technological operation of this Continent could maintain, for the building of a new civilization which shall be an example to all of the world, let us keep America in peace and set about the guiding of North America to its technological destiny of abundance as one nation and one people.'

—John Berge, 12247-3

TOTAL ORGANIZATION

(Continued from Page 8)

of all citizens of North America, not merely some segment, clique, class, or race. It has nothing in common with political totalitarianisms, such as fascism, socialism, or toryism. For the first time, a social area will be organized solely for, and on the basis of, function.

You, whoever you may be, if you are a citizen of North America, will inevitably become a Member of this Organization—The Technate of America (unless, of course, the authoritarians succeed in annihilating you first or your ancestors take you into their fold). The longer we citizens of North America delay in organizing ourselves into this one big functional organization, the more desperate will become the social situation that confronts the society of this Continent. And not the least desperate of the factors are the threats of a thermonuclear war and the imminent depletion of vital natural resources.

The developing situation demands an early decision and positive, uncompromising action. Joining Technocracy Inc. is the most positive form of action you can take at this time. Consider the alternatives for a moment and you will see what we mean.

—Wilton Ivie, CHQ

TOO MUCH CITRUS FRUIT?

You can get an export subsidy from the Government on shipments of oranges and grapefruit to non-citrus-producing countries of Western Europe. In announcing this export program, the Department of Agriculture says the payment rate for fresh oranges will be 75 cents a box, and for fresh grapefruit 60 cents a box. There also will be payments for the processed fruits.

—U. S. News and World Report

—Rather than subsidize the consumer, we find that the government is solely concerned with what is good for business.

The Sno-Freighter

(Continued from Page 18)

achieved by a unique axle suspension system and by coupling all cars through a universal joint and a long steel tube resembling a wagon tongue.

The rear axle of each car is pivot-suspended on the main frame member, which keeps all four wheels of the car on the ground and driving. Front axle supports are fastened rigidly to the main frame, but the axles are free to swing left or right for steering.

Cars are cushioned against normal operational shock by flexing of the huge rubber tires. The Sno-Freighter is the first vehicle to be equipped with these new 88-inch tires, designed by R. G. LeTourneau, Inc., for heavy off-road equipment.

The Sno-Freighter was shipped by railroad from Longview to Seattle for delivery to Alaska Freight Lines, Inc. They will tranship it on their own barges and cargo equipment to its area of operation.

SUBSCRIPTION ORDER

To: THE NORTHWEST TECHNOCRAT
2208 Eighth Avenue
Seattle 1, Washington

Enclosed herewith is \$ to cover
subscription(s) to Technocracy's Magazines for
years.

All Three Magazines, 12 months, 12 issues, \$3.00.
(All three publications are quarterlies, but so
rotated that one appears each month.)

THE NORTHWEST TECHNOCRAT
TECHNOCRACY DIGEST
THE TECHNOCRAT

- ☐ This is a NEW subscription.
☐ This is a RENEWAL subscription.

Name

Address

City Zone State

(or) City Province

(Foreign rates, other than Canada, Mexico, and U. S. territories,
20% (60c) additional to above rates.)



WANT A JOB ?

If you are willing to work and are serious about wanting a job, you can always find employment. Only don't go to the person who tells you that for a job; for he has none to offer you. And, what is more, he doesn't know of anyone who does have a job for you. He is merely trying to evade his share of the responsibility for your plight; and, speaking thus, he demonstrates how little he knows the world in which he lives.

THE NORTHWEST

Technocrat

JULY '55

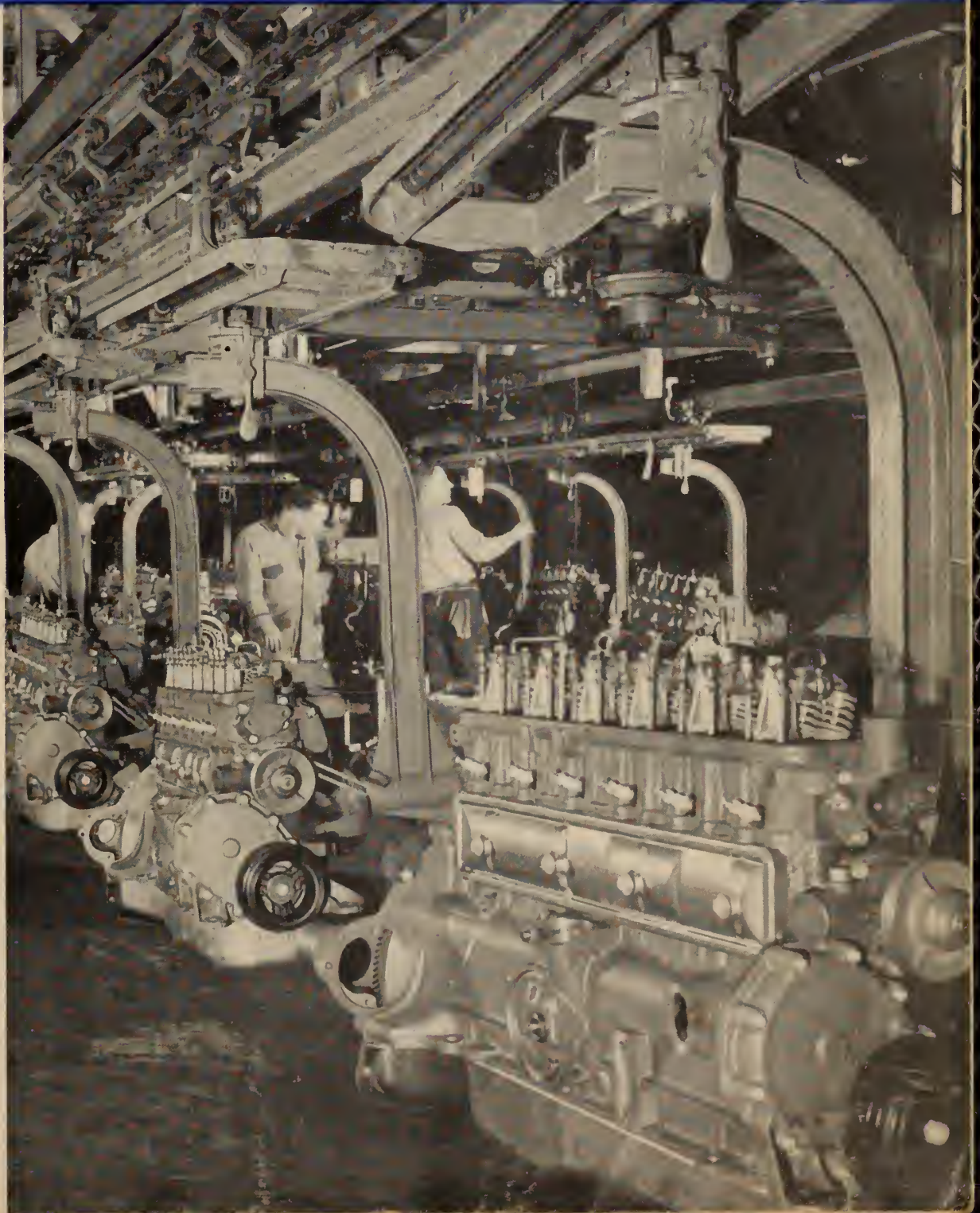
IN THIS ISSUE:

- The Course Is Set
- Nature Pays Off—
With Dust
- Assembly by
Automatic Machines
- Say 'Fascism'

No. 180 (Vol. XIX)

25¢

Sec. 3, R. D. 12247
TECHNOCRACY INC.
Seattle, Washington





THE FORCE OF AUTOMATION

'IN THE NEXT nine years, the demand for goods will grow faster than the number of people available to produce them. Automation will help U. S. work force fill a need for 40 per cent more goods.' The above is quoted from a recent advertisement by a large electric company.

In the past thirty years the rate of demand for goods did increase faster than the rate of increase in population. The facilities for producing goods and services have changed from hand operated machinery to high-speed electronically operated machinery. The high output per worker is primarily due to the use of better machinery requiring less human attention. The tremendous volume of goods being produced for the consumer is produced by a small percentage of the total work force. The buying power from the workers who produce non-consumer items such as: aircraft, warships, and other war materiel, is part of the impetus for keeping these factories producing. The goods being produced is for the most part accomplished by semi-automatic machinery. However, the type of electronically controlled production being set up on a small scale now can be amplified to include almost every phase of production.

Automation is not merely a tool which will aid in the production of goods and services, but once fully automatic machinery is placed in operation, the whole distribution of goods changes from an operation involving large numbers of people to one which involves a very small number of people. The use of machinery on a large scale in farming has brought about a tremendous reduction in the number of people involved while the volume of farm products continues to increase.

Automation will be one of the tools helping to

bring about the great volume of products which our increased population in the future will desire. There is little worry as to whether there will be enough people to carry on the operation. Rather, the concern should be placed on how the population can acquire enough purchasing power to buy the goods and services produced.

Wide use of automation in a Price System economy will probably result in having large sections of our population disemployed. The machines, with little guidance, can produce the goods, but they are very poor consumers. People without steady pay checks are not good risks and without credit cannot consume their share of the production.

Remember that any repetitive process, whether it is in the office, on the farm or in the factory, can be done faster, more accurately and untiringly by electronically controlled automatic machines.

—The Editorial Board

COVER PICTURE

The New Way

A far cry from the days of Henry Ford's first assembly conveyor, mechanical arms of steel now move 6-cylinder overhead valve engines throughout Ford Motor Company's ultra-modern engine plant at Cleveland without manual handling. The unique arms also position the engines at every desired angle for assemblers. The new conveyor system—first in the automotive industry—enables workmen to avoid fatigue, and thus they are able to concentrate fully on precision in assembly and quality control of product.

—Photo Courtesy of Ford Motor Company

THE NORTHWEST TECHNOCRAT

JULY 1955

THE NORTHWEST Technocrat

The Course Is Set

The next most probable social state on this Continent—the technological state—Technocracy—will not install itself, it must be installed. Already we have passed the point of no return. Either we go ahead to our destiny on the course that is set, or we become mired down in chaos and wreckage.

WHEN THIS country was still young, an imaginative author wrote the story of Rip Van Winkle, a fictional character who fell asleep and didn't wake up for 20 years. On awakening, he noted that some things had changed: he was older; a new generation of young people had replaced those he had known; and a few other details had changed, including the political regime. But the social pattern was the same. The way of life had been altered scarcely at all. The society of that day was pervaded with the general feeling that a man could go to sleep for a hundred years and, when awakened, still fit into the community and understand its operations, needing only a casual briefing with respect to details and having the inconvenience of getting acquainted with a new set of people.

The society on this Continent was not set on a definite course in the days of Rip Van Winkle. It had an open future, with many potential pathways to choose from. It was happenstance as much as anything which had determined the specific pattern of the Continent. It was happenstance that the colonies of the north Atlantic coast were peopled mainly by the white racial stocks of northern Europe; that their religion was dominantly Protestant Christianity; that, politically, a republican form of government became established; and that the culture, the business enterprise, and the social thinking were but slight modifications of those imported from Europe. There were many lesser facets that were similarly happenstance—that could just as easily have been otherwise.

But since the first settling of this Continent (almost coincident with it), a new factor entered into the social pattern of Europe; and this new factor was to alter drastically the future trend and destiny of North America. This destiny would have been the same had the settlers been brown, black, yellow, or olive instead of white; if they had been pagan, Buddhist, Catholic, or atheist; if they had been monarchist, communist, fascist, or democratic. The only probable difference of any significance would have been the time of arrival at a particular stage. That factor was technology, based on science.

Science and technology have changed the whole course of human history. At least, they have set the course on which society was to progress, abolishing the primitive alternatives and eliminating choice of direction. There can be any number of philosophies, but only one technology. The old philosophical values have been annihilated and the old Truths proven false. Naturally, there has been much social turbulence during this period of transition; and this turbulence is not yet ended, for the transition is still in progress.

Regardless of what our subjective thoughts and feelings are with respect to the old dominant philosophies, we shall be compelled by changing circumstances to relegate them to background positions or to oblivion. Not only philosophies but certain established patterns of social behavior shall fade away. Whether it is for good

or bad is not the point to consider, the same as the question of whether the atomic bomb is good or bad is irrelevant. Atomic bombs, along with social change, are here with us and we must adjust to them.

When this Continent was founded, the principal tools in trade of the citizens were a rifle, an axe, a plow, a team of horses, and a wagon. The primary enterprise was the small farm. There was no anticipation among the people that this pattern of life would ever change. Politics, economics, and social geography were all laid out to fit this way of life. The optimists of the time felt that, someday, their respective villages would grow into cities, acquire one or more industries, and handle more commercial business—become just like any number of the cities that were already in existence. Although some significant inventions were already accumulating, such as the steam engine, the cotton gin, and the principle of standardization, no one of 'normal' mind had any concept of social change. The west was pioneered and settled on the basis of age-old concepts, not in accordance with any new social idea or design.

Basis of Our Trouble

The America of Rip Van Winkle belonged to the Old World of social culture—the world of human toil and hand tools. The America of today belongs to a New World—the world of technology and extraneous energy. Most of the prevailing philosophies of the Old World still persist in the New World, but the way of doing things has changed very drastically. That is the basis for most of our troubles. The old philosophies and the new way of doing things are incompatible and in more or less open conflict.

One major conflict comes from modern technological production's being incompatible with the philosophy of the morality of toil. Attention is presently being focused on this conflict through the emphasis on automation and the 'guaranteed annual wage.' For thousands of years, the 'undeserving' elements of the population, which constituted the overwhelming majority of the people, were expected to toil at some drudgery for a precarious living. Only the 'deserving' few were permitted to live well without toil. Now, almost no one on this Continent toils for a living in the old sense, but the philosophy of 'earning a living' is still with us.

As the societies of the past 7000 years were mired down in human toil, poverty, and ignorance of na-

ture, so the society of the future shall be freed from toil and poverty, and man shall know a great deal about the world around him. The social patterns of the past were stagnant. One could learn much useful knowledge from a study of the past; for, the social past was also the social future. Now our society is dynamic; and it is set on a course that is unidirectional and irreversible. There is very little of a practical sort we can learn from the past. Our past is not our future.

Standardization and Mass Production

When man produced goods with human toil and hand tools, it was possible to have a handicraft art that could take many forms. Each piece of furniture, for example, could be a separate design. There was no premium placed on standardization and mass production. So much effort had to be expended on each item that only a few units of a thing could be produced. There was never enough of anything to go around. Even such a simple instrument as a sewing needle was a prized possession in the Old Days, and not everyone could own one. Now, with modern technology, man can turn out millions of each kind of item that is in general demand. In fact, if something can be produced by the hundreds of millions, the total human labor is less than that once expended to produce similar things by the mere thousands. Cigarets, flashlight batteries, glass bottles, bobby pins—these are no longer produced by human toil techniques. In fact, the human being hardly enters the sequence prior to the retail distribution end.

But the retail distribution process can readily be automatized as well as the production, leaving the human being to participate only as a consumer.

The course of man is set in the direction of the automatic factory, where raw materials enter one end by automatic conveyor and finished consumer goods come out the other end, packaged and ready for handy distribution by automatic vending machines.

Earning a Living

The philosophy of earning a living is forcing many people to work at jobs that no longer require human beings to do them. For example, the railroad transportation industry, including the maintenance of track and the construction and repair of equipment, employs more than a million men. Yet, if the railway system were properly designed, using techniques which are already known, whole trains

could be assembled and moved to distant places on the Continent then disassembled with no employees in the yards or on the trains.

The telephone system is gradually becoming automatic in its operation, eliminating employees by the thousands while providing improved service. Yet, the telephone system is far more obsolescent than it need be. Among other things, it requires too much repair and cleaning of equipment. The trend is toward a telephone system, wherein one can dial any other phone on the Continent direct. And it will include portable phones with radio connections.

One would gather from the Chamber of Commerce ballyhoo that automatic machines will be in disrepair so often that more people will be required to construct, install, and repair them than were used to operate the previous machines. However, it should be evident to all that modern production machines seldom are in need of repair. They are made to operate for a long time without interruption. The continuous line, high speed machines of the automatic factory, making millions of identical items, must be designed to operate the maximum length of time without shutdown. Even then, we can anticipate that the process of repair and replacement will be automatized so that a new machine or a new part will be shifted into operation and the old one removed, as required, without stoppage of the line. Machines used in production are usually made to last; it is mainly among Price System consumer goods where early 'trouble' is included in the design whether it's a razor blade, an electric lamp, a suit of clothes or a house.

The social trend is toward goods which will last an optimum length of time and need little or no upkeep or special attention. Economy of operation will dictate that mechanical equipment be withdrawn and replaced prior to any major breakdown. Clothes will be made to require little or no professional laundering cleaning or repair. Automobiles will require no special attention other than refueling or recharging. Dwellings can be designed that require very little 'housekeeping.'

Inevitably, the human being will be freed from the task of earning a living; yet, he will have a very good living. This living will come to him as a social heritage not as a consequence of some philosophical justification, such as: employment at a job, political position, monetary investment, gambling, or inheritance of wealth. The morality of toil doctrine will be discarded in the same dump with the 'stork brings babies' myth. We can anticipate that

every bourgeois businessman, politician, and ecclesiastic will fight bitterly against the abolition of toil-for-the-other-guy. Even the workers of today are fighting for the right to work. So, the trend toward human freedom from toil will continue, not because it is really wanted by anyone, but, because our social progression is set on a course from which the society cannot retreat. Materialistic technology is freeing man from the abuses of 'Divine Judgment' in spite of man's reluctance to be freed.

Adjustment to Freedom

This reluctance to be freed from toil comes not from any love for work as such but because of our collective acceptance of a perverted system of economics, the Price System, which seeks to perpetuate toil, scarcity, and waste. Adjustment to freedom from toil can be made very easily by people, when it is anticipated in advance and does not bring economic hardship with it. In any event, it is a situation which the North American people will have to accept and live with.

A high standard of unearned income for every citizen of the Continent will soon have to be guaranteed by the social order of the Area. With it there will have to be instituted a centralized control over the entire economy of the Area. This does not imply that government will take over business enterprise (like the government of Russia has done); rather, it means that the society will have to repudiate all business, private and public. Production and distribution shall be accomplished by a technological process, based on measurement, and stripped of philosophy. This may be 'cold and impersonal,' as its critics claim, but it will be effective and, for better or for worse, it will lack that human touch (with the emphasis on the touch) which characterizes business enterprise.

There are many reasons why business enterprise (both private and collective) is on the way out, among them: business enterprise cannot handle abundance, only a scarcity; business enterprise is far too wasteful of non-replaceable resources; business enterprise can operate only on the basis of exchange values, which is too complex, too inefficient, too vague, and irrelevant in an age of abundance.

New Way of Living

Consumer goods and services will be produced as required, with optimum utility (not profit) being the determining factor; and they shall be provided

free to the public, subject only, in pertinent cases, to the individual's establishing proof of personal use for the item concerned. For example, should a man request a woman's fur coat from the distribution outlet, he would have to establish that he has a reasonable personal use for such an item. (Obtaining it as a gift for some woman would not be considered a 'reasonable personal use.' If the woman wants a fur coat, let her obtain one on her own behalf.) Similarly, should one attempt to hoard an excessive number of any one thing, he may be called upon to explain his personal need for so many items of that one thing. A technologically-designed economy will not seek to restrict legitimate use of anything but it will fight unnecessary waste.

What about government? What does technology decree along this line? Is not democracy the best form of government for a free society? These are questions which readily come to mind among people long conditioned to being pushed around by political regimes and who somehow acquire the idea that politics is necessary to the successful operation of any society.

Technology Is Non-Political

Technology has only contempt for politics, regardless of its brand name. No physical mechanism requires the 'services' of a politician, whether it is a single machine, an automatic factory, an industrial sequence, or a social order. Politics, like business, is an interference, not a facility. Society would function much more smoothly without both. Technology shall design the social mechanism and the various industrial and service sequences of which it is composed, each in accordance with the function it is to perform. Trained technicians will operate the mechanism in accordance with its design and function, not according to some Party Line. Such things as heresy, loyalty oaths, brain-washing (being symptoms of political disease) will be passe. Democracy (which is only a myth at present) will take the form of personal freedom to participate in the consumption of goods and use of services, including recreational facilities, without restrictions of price or fear of the Inquisition.

Regimentation of human beings is common practice in the Old Order, and it is compatible with the operating characteristics of business, politics, and ecclesiasticism. But regimentation of human beings is not compatible with technology and will make no sense in the social order of the future. For the first

MY TWO CENTS WORTH

I was going to put in a little garden this year so I could have vegetables of my own, but I decided against it after figuring how much work it would be and how much money it would cost. Besides, it happened to be a hot day when I first started working on it, so I took time out to think it over and that is when I decided not to do it. It costs money for seeds and fertilizer and garden tools and bug spray and other things; then you have to pay to get the ground plowed, unless you want to do all that work spading it up, and I don't. The water isn't exactly free, either. But you might not object to the cost so much if that's all there was to it, even if it was as much as the vegetables would be at the high prices they charge these days.

One thing that decided me against having a garden was the way you would be tied down. You would have to spend all your spare time tending it and you couldn't go away for a vacation or anything. Then it occurred to me the neighbors would be having more vegetables from their gardens than they could use all at once, and you would be doing them a favor if you let them give you some of their stuff. Of course, you should smile and say 'thank you' just like they was doing you a favor, which I guess is also true.

I could've planted the back yard in grass, instead, but that would be almost as bad of a job, and besides, you can't eat grass. It has to be watered and cut and fertilized and it gets full of ants. But you could still be friends with the neighbors if you planted the yard to grass and kept it tended.

I finally just had the ground leveled off and a couple of loads of fine gravel spread over it. Then I put a garden table and some chairs and a few beach umbrellas out there. Of course, it cost a little money to begin with, but it's just as nice as a lawn and I don't have to be bothered with tending it all the time. The neighbors stop and look kinda funny at it and don't say anything. I guess they think I'm not quite right in the head because I'm not like they are. But I figure they will get used to it after a while if you just go about your business and don't let them worry you.

— Ima Moron

time, a person can behave as an individual without being condemned as a heretic, subversive, or queer. This is not intended to imply that the neighbors will miraculously become polite and tolerant. Rather, since one's income and privileges of citizenship cannot be suspended, one need not succumb to the tyranny of the neighbors.

One may wonder why Technocrats are so concerned with the problem of social progress on the North American Continent if they are convinced that the course is already set and the results inevitable. Why not just relax and let 'nature take its course?' But it is not that simple.

Hysteria Behavior

There is an alternative to a technological social order for North America—and for the world. That alternative is chaos. Human beings, collectively, are capable of doing foolish things; and the record of North America is heavily blotched with such behaviorism. The present witch-hunt hysteria is an example. This hysteria has been generated in part by Roman Catholic hatred for bolshevism and partly by big business apprehension over public enterprise; and there are lesser contributing causes. It illustrates how the people of this Continent can become emotionally imbalanced, and held there, exhibiting insane behaviorisms of many sorts, by the application of Inquisitional techniques.

The vocal agitation for a 'preventive war' by some of our most pious and most honored 'statesmen' has stirred up a sizeable following of supporters. Yet it is generally conceded that a 'preventive war' could very easily result in death to fifty million Americans, with another similar number maimed and disfigured. Further, there are grave doubts as to whether the human species could survive at all; and, if so, whether it would be free of serious hereditary blemishes. In any event, there is no assurance that a high order of social organization could ever be re-established. Yet, prominent men who advocate such a course are applauded and promoted; while others who advocate that we try to get along with other people in the world are dragged before the Inquisition and harassed, disemployed, and condemned as subversives. No one of prominence among us even suggests that all 'preventive war' advocates be shot on sight as deadly-dangerous vermin. So, you see, the world is not yet safe for technology. And it cannot be so long as the witch doctors of the Old Order remain in seats of authority.

There is also an external danger that is as serious and threatening as any internal danger. The people of the United States comprise only six per cent of the world's population; yet, they hog for themselves more than fifty per cent of the world's production of irreplaceable resources. On top of that, they have the arrogance to parade themselves before the rest of the world as prize specimens, bragging how wonderful and successful they are and displaying disdain for others because they are poor and unsuccessful. Worse than that, we publish all over the place large illustrated brochures telling how much more successful we shall become by 1975 when we will be consuming 75 or 80 per cent of the world's mineral resource production instead of only 52 per cent. In line with this, one of our chief resentments against the USSR at present is her reluctance to let us consume her mineral resources, particularly her petroleum. American business, backed up by undercover diplomacy and the armed forces of the nation, has its nose in nearly every mineral deposit accessible to the West. And it is constantly seeking to expand its interests.

As the rest of the world industrializes, it will find itself in need of vast supplies of metals, fossil fuels, and other minerals, which were previously exported to the United States and western Europe. The United States will soon find itself despised and hated around the world (even more than now) for the greed and arrogance it has displayed. The mercenary puppet regimes which we have established and held in many countries of the world for the purpose of helping American business loot their national domains of mineral resources are highly vulnerable. Among such mercenaries, which are completely or partially stooges for American enterprise, are the political regimes of most of the Latin American countries, most of the countries of Western Europe, some countries of Africa, the Mohammedan countries of Iraq, Iran, Saudi Arabia, and Pakistan, and the Asiatic nations of Siam, the Philippines, South Vietnam, Formosa, South Korea, and (temporarily) Japan.

Forced Back to This Continent

Should our mercenary puppets be overthrown and we be forced back to this Continent, renouncing our economic imperialism, there is a good chance that our businessmen and politicians will go berserk and try desperately to engage this Continent in a war of annihilation, including the annihilation of the people of North America. So far, foreign

statesmanship along with lack of enthusiasm for sudden death among our own people have kept us out of a thermo-nuclear war; but there is no assurance that these influences will suffice if our leadership gets really frantic.

Then, of course, there is always the possibility that the wastage of Price System enterprise, including the military, will so effectively denude this Continent of essential minerals that we shall be unable to maintain our present highly wasteful civilization. In which case, our leadership may launch a war of aggression to gain the resources of other areas for American business enterprise. Such a possibility makes the time element a significant factor in the work which Technocracy is doing.

Thus, a highly developed technological society is the destiny of this Continent only if the course of its progression is not disrupted by chaos resulting from war or the failure of basic supplies. Consequently, Technocrats and all others vitally interested in the future of society on this Continent cannot afford to merely sit and wait. There is a big job to be done and the 'sons of Martha' must do it. The 'sons of Mary' are too busy 'living it up' to be bothered with the problems ahead; and it is doubtful whether they will ever know what happened or how it happened. They will either be carried upward with technology, at the same time congratulating themselves on their wisdom and foresight, or they will go screaming down into chaos, blaming others for being asleep at the switch. They are the majority of our people and the destiny of this Continent is their destiny, but the 'sons of Mary' are not the important people. However, we wish them no bad luck, rather, the best this Continent affords.

True Guardians

The people who are more interested in solving problems than in acquiring wealth and position are the true guardians of this Continent. They will do what they can to keep our society on the course of technological progression and to guide it past the pitfalls of chaos. This category of people have a voice far out of proportion to their numbers. They do not lead parades or review them; they do not make speeches or cut ribbons at opening ceremonies; they do not hold the financial strings; and they are seldom decorated for social service. But wherever effective work is being done they are in command.

Technocrats know that technology is dynamic by nature, that it must go ahead in a specific direction

—in the direction of higher efficiency and less social cost—and that its progression is not subject to the will of the people. They also know that to continue forward technology in the social field must be liberated from the whims of the witch 'doctor' elements which now hold the social reins. This liberation will come partly from incompetence of the witch doctors to control the situation and partly from a mass pressure of the people who are concerned about the social destiny of North America. It is futile to attempt persuading politicians to preside over the liquidation of politics, or to persuade businessmen wilfully to preside over the demise of business enterprise, or to ask people who have reached positions of prominence in the Price System to work for a high standard of living for all citizens at the expense of their own differential advantage. The job must be done by those who recognize the problem and are willing to see it through. It is safe to say, most of them will never be heroes in their own time.

The next most probable social state on this Continent—the technological state—Technocracy—will not install itself; it must be installed. Already, we have passed the point of no return. Either we go ahead to our destiny on the course that is set, or we become mired down in chaos and wreckage.

We do not have the choice of 'going back' to conditions of the past—any past period. For future man to ignore the knowledge that has been gained in recent years and to reconstruct a facsimile of some past age would require a universal monastic discipline that is incompatible with human nature, hence impossible to maintain (except possibly among a race of moron-imbeciles). The recent report on the effects of the atomic bombing of Hiroshima indicated that the bombing tended to shrink the heads and dim the vision of the victims. Perhaps that technique could be employed as a short-cut method of producing a race of 'humanity' susceptible to monastic discipline—a much shorter and simpler method than a lifetime of 'brain-wash' indoctrination. Seriously, though, we can disregard any possibility of 'going back' or even of remaining where we are. For better or worse, we are on the road of social progression, and the upper asymptote of that progression is not yet in sight. This progression can only be interrupted by chaos or terminated by the total annihilation of all human life.

Technocracy did not invent technology, nor is Technocracy directly responsible for the social progression that is now in effect. Rather, Technocracy is the outgrowth of technology. It arose from an in-

telligent analysis of the social situation and a brilliant projection of that analysis into the future. Further, it is a program of social organization and function which will permit us to adjust to the social progression with a minimum of friction and social cost.

Technocracy has only contempt for those who advocate violence as a means of arriving at a social decision, and this goes plural for the advocates of a thermo-nuclear war.

Certainly, there are enough among the 'sons of Martha' who prefer a peaceful and efficient transition out of the Price System to make the social decision in favor of such a transition for this Continent. Their voices are the ones that count at the showdown; and it is to them that Technocracy presents its program, and it is on them that we must pin the responsibility for a positive future for mankind.

—Wilton Ivie, CHQ



Tool-control board in Ford Motor Company's new Cleveland Engine Plant is used in the capacity of preventive maintenance. It stores tools and automatically records life of tools in operation in huge multi-station transfer machines. Pre-set counting dials, equipped with automatically operated lights, signal warnings to machine job setter when a particular drill, reamer or tap requires changing. This new method of tool control avoids costly and time-consuming shutdowns of machines, reduces tool breakage and improves quality of machining work. When tool in operation in machine reaches life expectancy limits, the board flashes warning light to job setter who changes the tool at an opportune time before mishap occurs.

—Photo Courtesy of Ford Motor Company

Parking Our Autos

WE auto stop care from taking over -----

By BYRON FISH

ANYONE who looks at a new shopping center can see it takes a plot the size of an airfield, all but one corner of the land for automobiles. The motorist stops, climbs up on a bumper to get his bearings, and trudges off for the store, down on the horizon.

This is a glimpse of the future, when the parking lot and the super highway have crowded cities off the map. They'll remain as buildings around the perimeter of a yellow-striped asphalt plain.

Eventually we'll run out of land, because we suspect nothing can stem the flood of cars.

The automobile industry keeps announcing that it is so many hundred thousands of cars ahead of last year. Perhaps it will discover it can't turn off the assembly lines even if it wanted to. After a while, automobiles will outnumber people.

It already has happened in Southern California. Where once there were orange groves, used-car lots now run 90 miles from Los Angeles to San Bernardino.

These seem to be merely extra automobiles, because the whole 4,000,000 population of Los Angeles County is driving around simultaneously in other cars, as any visitor can tell.

Since none of the Californians can find a place to park, they don't need their buildings. The buildings are being torn down and replaced with more freeways.

Pretty soon Seattle, too, will be ripping out homes and hotels to make a path for a block-wide tollway. There's less and less space for a human being who isn't packaged in sheet metal, chromium and wrap-around glass.

Inventors are trying to save people by finding ways to park 20 cars where only one could be put

before, but there's small chance they'll come up with anything in time.

They're talking about 'pigeonhole' parking, but it's not pigeons we've got to park. Our problem already is condor-size.

An inventor recently introduced 'Ferris-wheel' parking. That's one way to raise the windshield out of reach of pink tickets.

The Ferris wheel probably won't take care of enough cars, but it may inspire other types of devices that at least will make parking an entertaining game.

We might add merry-go-round parking. Instead of a motorist driving dully around and around the block, waiting for his wife to come out of a store, he could make circles to the accompaniment of caliope music.

Or a roulette-wheel parking lot would be fairer than the ordinary ones we have now, with their signs of 'Sorry, All Full.' The competing drivers would have a gambling chance, 38 to 1 odds.

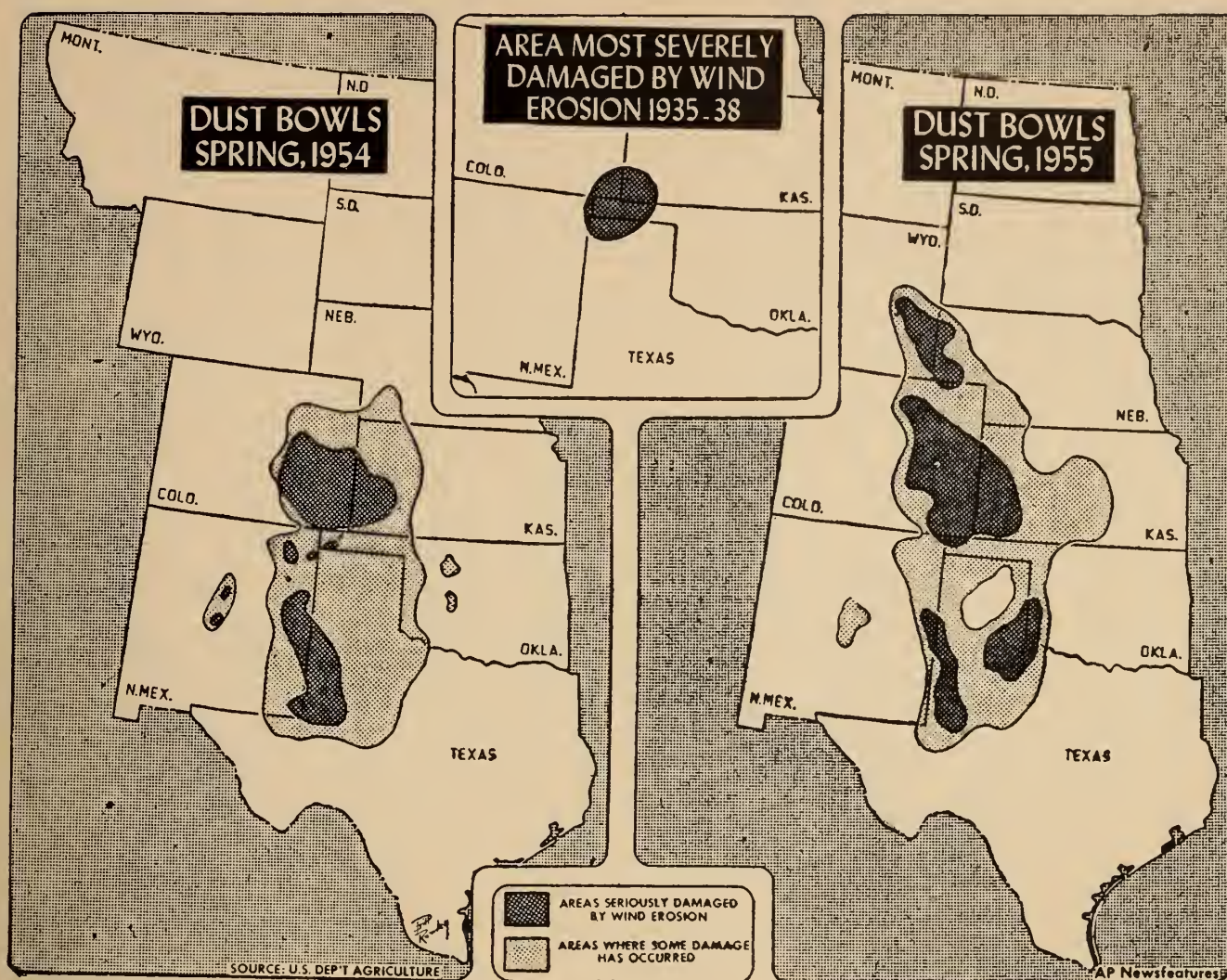
But those are temporary solutions. Automobiles are bound to win in the end, because it doesn't do much good when they grow old and die a natural death.

They can't be cremated, so they are hauled off to vacant lots, ex-farms and the desert, where their rusty carcasses continue to spread over more and more landscape.

Salvage-metal yards valiantly try to chomp up old cars and pack them in flattened bales, but it's a losing struggle. We watched one junk yard slowly disappear from sight in automobile bodies, until just the top of its smokestack showed.

Lately, there's no more smoke from the stack. We hope the yard's workers got out all right.

—Reprinted from Seattle Times



NATURE PAYS OFF WITH DUST

AFTER YEARS of exceptionally favorable weather conditions which saw the farmers of the Great Plains region reap abundant harvests from their holdings, this vast region is giving ominous warning of a return to the parched conditions of the depression years. Already, the area seriously affected by drought is much greater than during the Thirties, although the intensity of the drought conditions has yet to reach that of the 1935-38 period. But continuing inadequate rainfall is almost certain to cause dust conditions which will dwarf those of twenty years ago.

More than 30,000,000 acres lie powder dry from four years of severe drought. Another 95,000,000

acres are suffering from wind erosion. In one year there has been an increase of twenty per cent in the area being seriously affected by drought. Last year there were two bowls of serious damage within the same general area where disaster struck in the 1930's. Now there are four. For the first time the destruction has pushed northward into Southeast Wyoming and into Western Nebraska.

Farms and grazing areas which are protected by cover crops will be ruined along with exposed areas, as occurred during the 1935-38 period, unless the drought eases. Losses at present run into hundreds of millions of dollars, and the general situation remains critical. Many of the farmers in the area

haven't made a dime since 1951, and have been lucky to get back their seed. Each year the problem gets worse as the land loses its subsoil moisture.

The present Dust Bowl condition set in during 1951. Parched by drought, the loose soil began blowing heavily in 1952, inflicting damage on nearly 5,000,000 acres.

Growing steadily worse through 1953 and 1954, this winter the danger zone expanded, whipped by winds up to 75 miles an hour that threw the soil 20,000 feet into the air.

As of April 1, the Soil Conservation Service reported the Great Plains had received less than one-half of normal rainfall in the preceding thirty days. The amount varied from zero to one-half inch in some areas.

Puny measures, such as plowing the soil into ridges to give some windbreak protection, and the use of other emergency tillage to roughen the surface, apparently is all that is being done to control the situation. Of course, there is much hoping and praying for rain, no doubt. (It is conceivable that Secretary of Agriculture Benson is hoping and praying just as fervently that it won't rain, since he is about to drown in mountains of wheat and corn, and other agricultural products stored by the government, totalling over \$7 billion.)

It is to be kept in mind that before a plow touched the soil of the Great Plains, in many places the grass was so tall that a man could ride through it on horseback without being seen. Tough grass furnished cover for the soil throughout the area. There was nothing bordering on the dust storms we have seen in recent years.

Grazing Land

The Great Plains has marginal rainfall and marginal soil. The combination makes dependable agricultural production impossible, under present conditions, over most of the area. The farmers who have been foolish enough to try to farm it will have to learn the hard way that the price is dear for attempting it.

Technocracy proposes that most of this marginal area be returned to its natural state to be used as required for grazing land only. That which would be used for growth of crops would be farmed with technology which would permit plowing to a depth of two feet. This would permit storage of moisture in much greater quantities than is now the case. Areas twenty-five miles square would be farmed as blocs. Maximum cover would be given to the

soil at all times. Under these conditions, there would be little or no dust. The soil erosion on this Continent would cease. Rivers would run with clear water again. Thus, we would begin to reclaim the devastation to the soil which has occurred in the past fifty years.

The farmer, with his two-bit objective, is watching even that being dissipated into thin air. No doubt, the farmer thought perhaps there would be no more droughts, as many others have thought that the Price System had solved other of its problems. It has taken time, but here we are again, face to face with the need for Technocracy. This time there is no way out.

—12247-1

Let Science Solve The Problem

There are many other things science could assault with a favorable probability of successful conquest, if permitted the facilities, personnel, and social stimulus. In the realm of human ailments, for example, are cancer and the debility of old age. In the field of energy is efficient conversion of radiant energy from the sun into other, more readily usable forms. The synthesis of chemicals and materials of many kinds, for many uses, offers a wide range of projects to work on. A major (and very sensitive) problem is the breeding of a race of superior human beings from the scrub stock that now populates the earth.

There are many other potential social advancements that do not require primary scientific research but merely the technological application of the knowledge already available. Among these are: distribution of abundance without business enterprise and without price; social governance without politics and taxation; abolition of crime and wars; providing adequate housing, transportation, education, and health care for everyone; complete eradication of venereal and many other diseases.

Through centralized control and organized planning on a functional basis (without interference of politics, business, and philosophy) the human race could advance its welfare to heights not yet dreamed of by social reformers.

—Techno Critic in May Technocratic Trendevents

Have You Observed?

...In the view of the State Department, and particularly its arch mealy-mouth, John Foster Dulles, this talk of peace in the world and proposals to meet for the solution of existing problems has gone about far enough. Fifteen years of phoney 'prosperity' due largely to war have put the whole economy so far out on a limb in terms of incurred debt that the only solution for the Price System on this Continent is more war. At the very least, the people of North America must remain convinced of the imminence of war so that more than \$40 billion a year for 'greater national security' can be pumped into the sagging business structure to avoid wholesale bankruptcy, and another depression, which could destroy the North American Price System altogether. Peace talk, and even worse, the possibility of being pressured by world opinion into agreements tending to lessen world tension, are demoralizing to the current 'World War III' effort. Upon analyzing the intentions of Dulles and his gang, it is no mystery why they have a phobia about the conference table.

...If it is to be assumed that the Russians are 'all black,' it does not follow automatically that U. S. leadership is 'all white,' considering the objectives of the two countries. As a matter of fact, one would be hard put to find a shadier collection of stooges for the Price System anywhere in the world, than those represented in American leadership. That they stand first and foremost for the interests of the Price System is more than sufficient excuse for them to be labeled thus; and their declarations, ranging from threats of 'massive retaliation' to 'preventive war,' leave no doubt of their capacity for committing any atrocious act against the welfare of their country and the world in which they live.

...The universal language of science continues to demonstrate that it is the great equalizer among mankind. At much expense and effort, the U. S. and U. S. S. R. developed mighty nuclear devices of destruction. But now the research leading up to the development of these weapons has been passed on to countries of lesser resources, making possible the production of the weapons at a fraction of the

original cost. This poses an interesting problem to the U. S. and U. S. S. R.: namely, the threat of extinction soon shall no longer come exclusively from these two countries, but could come from several sources. Or an attack upon one of the two principals by a lesser country could, in the trigger-happy world situation, precipitate a major war of thermo-nuclear intensity. To offset such a possibility, Technocracy proposes a delineation of spheres of influence for the U. S. and U. S. S. R. to allow for control of attempts to precipitate war. We may not love the Russians; but if we are to live, we shall have to learn to share the world with them.

...There are many individuals in public office, and in positions of vast social influence otherwise, who basically are anti-social, are too old and conditioned to accept social change, or who are guided by some philosophy of how society should be. They would rather sacrifice the entire human race than to accede to what is demanded by reality of conditions. Men of these frames of mind cannot be entrusted with public responsibilities in North America. Technically, North America is the most advanced of any area in the world. Consequently, this area shall be compelled to bear more responsibility than any other area for what happens in world affairs in the future. America's problem is the result of a failure to adjust to its technical progress, to acknowledge and implement a technological solution to the problem of **abundance**. The fear and frustration of the moment underscore the incompetence of the present leadership of North America.

...America has a magnificent future. But that future is not to be with its Price System. It is envisioned in Technocracy, the only engineering blueprint for social operation ever presented to the world. Can we rise to the challenge to make a clean break with the past in order to build a new future, or shall we watch stupidly as a great possibility turns into a terrible social catastrophe? Circumstances hold each of us responsible for making a decision between the two possibilities. There is no escape.

—Harry Briggs, 12247-1

DEVELOPING TRENDS

The creation of this new kind of week-end shopping center, bringing together the principles of modern merchandising with the mass sales appeal implicit in emphasis on low prices, is the aim of a group known as Thriftmart, Inc., which plans to build a total of ten such developments throughout the country.

It's all part of a current revolution in merchandising, which is producing some drastic changes at the sales counter. In this case the sponsors are adding the appeals of a low-price merchandising policy and of sophisticated type of ballyhoo to the shopping center idea.

The project is sponsored by an organization called Thriftmart, Inc., headed by Edgar Levy, a New York real estate man. The organization is betting \$20,000,000 on the success of the new merchandising philosophy. Among Mr. Levy's associates are J. Howard Denny, formerly president of Franklin Simon, and Gene Schoor, New York public relations man.

Mass-type selling, with special events each hour, will be encouraged among the 150 to 200 tenants handling everything from imported kitchen delicacies to aluminum screen doors and pianos, in the "under one roof" operation. Emphasis will be kept on good-quality merchandise, restrictions will be enforced to assure conformity of design throughout, and leases will be written for at least a year with all tenants in a move to avoid a "farmer's market" atmosphere.

The mart's shopping hours will be from 11 a.m. to 11 p.m. on Fridays and Saturdays only.

With parking space for some 3,800 to 4,000 cars, the first Thriftmart is expected to draw its customers from Philadelphia and Trenton, as well as from the rapidly growing industrial area along the Delaware River. A half-million potential customers are within twenty minutes driving time.

There will be an auditorium, a nursery and playground for children, and booths will be made available for institutional and charitable groups for special sales and exhibits weekly.

Set to open on August 19, the huge shopping mart has been designed by Morris Lapidus, is of modern cinder-block construction, painted white, with a blue roof. Modern decor will be in bright colors, and there will be air-cooling throughout. A separate area at one side of the main structure will house a complete supermarket, while at another side there will be an "auction area," where goods will be sold in a circus atmosphere.

—New York Herald Tribune

CRIME RISING

Major crimes in the United States numbered 2,267,250 in 1954, a 5 per cent rise over the preceding year, the FBI reported recently. It was the fifth straight rise in five years, the report said. While the population grew by 7 per cent since 1950, the "crime rate" jumped by 26.7 per cent.

—Labor

NEW ELECTRONIC BRAINS

NEW YORK—New electronic computers, only recently available to business, are bringing about a revolution in business office techniques.

These million dollar "giant brains" are taking mountains of paperwork off the necks of white collar workers by doing automatically in seconds what it used to take days and even weeks to do. And what the "giant brains" are doing for big business firms today, "baby brains" can do for smaller business concerns tomorrow.

International Business Machines Corp. recently installed one of its "Model 702 electronic data processing machines" at the St. Louis headquarters of Monsanto Chemical Co.

Seated at its control console, an operator has at his command the computing ability of 25,000 trained mathematicians. On each of its reels of magnetic tape, it can "remember" enough information to fill a 1,836-page Manhattan telephone book.

In one second, it can add 4,000 five-digit numbers or get the answer to 160 equally complicated long division problems. It can give its answer in any of four different ways—flash them on a TV-like screen, punch them on cards, print them on paper or store them on magnetic tape at the rate of 15,000 characters a second.

This is what the "giant brain" already has done for Monsanto:

In just 12 machine-hours, it did 1,200 cost reports that normally took 1,800 man-hours to complete. In little more than two hours it produced a financial statement that used to take Monsanto's staff of accountants 320 hours.

In addition, it opens new horizons for Monsanto chemists by working out complex equations to help discover new products and improve old ones.

—Associated Press

WHEAT GLUT CONTINUES, BINS FULL

If United States farmers do not grow one bushel of wheat this year, there still would be enough to satisfy domestic requirements until January 1, 1957, agricultural economists point out. The wheat carryover July 1 is expected to total one billion bushels, about 90 per cent of it to be owned by the Commodity Credit Corp.

* * *

The Department of Agriculture estimates that the 1955 spring crop will be 177,000,000 bushels, making total crop of 830,000,000 bushels, compared with a total last year of 970,000,000 bushels. Add this year's crop to the one-billion-bushel carryover and the total supply is 1,800,000,000 bushels for the 1955-1956 crop year, only slightly less than that of 1954-1955.

—New York Herald Tribune

—Here comes an addition to our already tremendous storage problems.

THE NORTHWEST TECHNOCRAT

CAR DEALERS FACE PROBLEM IN TRADE-INS

DETROIT—The handling of trade-in cars is becoming a major problem for many new car retailers. Some retailers are wholesaling the trade-ins to used car dealers; some are attempting to retail them.

In the latter instances extensive reconditioning often is being undertaken. This includes repaint jobs. Some 1953 and 1954 models are being repainted in two-tone and three-tone combinations of colors usually identified with 1955 models.

—Associated Press

—We have cars but no place to drive them and no place to park them.

METHODISTS CALL FOR 'ADEQUATE ANNUAL WAGE'

GREENCASTLE, INDIANA—Without referring to the United Auto Workers' guaranteed-annual-wage plan, the Northwestern Indiana Conference of the Methodist Church called for "an adequate annual income for each family."

The conference adopted a resolution by its board of social and economic relations saying:

"We look forward to the day when both labor and management, as well as other sections of the economy, will recognize the necessity of establishing an adequate annual income for each family."

—Associated Press

SAYS BENSON

WASHINGTON—Agriculture must go out and ask for business—not wait for business to come to it.

That was the course of action laid down by Agriculture Secretary Ezra Taft Benson in a speech at Chicago emphasizing his familiar theme that the farmer's future depends mainly on what he does for himself.

He explained that some economists believe that farm output per manhour will rise 40 per cent in the next 10 to 12 years as compared with a 35 per cent gain in industrial output.

The Secretary added that, on the basis of progress during the past 25 years, it is reasonable to expect that national output will go up nearly 50 per cent and per capita income after taxes nearly 30 per cent in the next decade or so.

He declared: "It will not be a simple matter to fit farming into this kind of future. But we must do it. We will be able to go on faster in our industry than we go in our agriculture. Why? Because food always comes first."

—INS

—A politician trying to sound intelligent.

UNIVAC II

Univac's big brother, Univac II, is said by Remington Rand to have double the speed and capacity of the earlier model. Univac II's magnetic memory can retain 24,000 characters, with additional cores, this can be raised to 120,000 characters. That's almost 10 times the memory capacity of Univac I, says Remington Rand.

—Business Week

NEW PAINT

LONG ISLAND CITY, N. Y.—A concern here has developed a plastic traffic paint for marking lines on streets and roadways that it says will dry within 30 seconds and last five times as long as other traffic paints.

—Seattle Times

—Less manpower needed.

RESERVE STOCKS

WASHINGTON—The Hoover Commission took a hard look at the \$3,400,000,000 a year the government spends for food and clothing, and estimated the taxpayers could be saved \$340,000,000 annually by better management.

In the Army alone the inventory of operational apparel supplies as of June 30, 1954, was found to be \$464,300,000, and its reserve stocks of apparel amounted to \$837,362,000. The task force found too many service depots in operation, and "tremendous" quantities of depot stocks believed to be far in excess of what was needed for the operating levels set by the armed services.

Operational items, not including large reserve stocks, included 2.8 years' supply of wool serge garrison caps, 4.4 years' stock of wool taupe garrison caps, and 10.6 years' supply of women's wool serge taupe uniforms.

The Navy had in its operational inventory on the same date 8.1 years' supply of blue trousers, and enough blue (not dress) jumpers to last for 9.3 years at the current rate of issue.

In the Air Force operational stocks were enough blue coats to supply personnel for 3.6 years, blue jackets sufficient for 5.3 years, enough blue wool trousers to last 3.6 years and 4.2 years' supply of blue overcoats.

The Marine Corps at current strength could be equipped with green coats for 3.2 years from the stocks then on hand, and its stock of green trousers was sufficient for 3.5 years.

Enough WAF wool jackets to fill the needs of 4.9 years, and WAF wool slacks for 4.5 years were in stock.

—New York Herald Tribune

—Just another example of haphazard Price System distribution.

PUSH-BUTTON

CHATTANOOGA, TENNESSEE—An extraordinary new example of "automation" was announced here by Chattanooga's largest engineering company, Combustion Engineering, Inc. The firm said it will begin construction of a "push-button" foundry here to produce cast-iron pipe by "hydraulically and electronically controlled" methods to replace virtually all of the work now done by human hands.

—Labor

SPEEDY NEW COAL-MINING MACHINE BUILT

PITTSBURGH—Joy Manufacturing Company said it is ready to begin commercial production of a huge continuous-mining machine that will dig and load eight tons of coal a minute.

The new machine, expected to be on the market in late August, is equipped with two boring arms and top and bottom saw chains which cut a swath of coal 12 to 13 feet wide and six to eight feet high.

Joy calls its new product the twin borer. Unofficial estimates are that it will cost about \$110,000. It is equipped with a conveyor belt which scoops up the fractured coal and transfers it to a loading belt.

The eight-ton-a-minute capacity is the fastest yet reported for a continuous-mining machine. The nation's coal production last year averaged something like eight tons a man a day.

One man can operate the twin borer, sending the cutting edges of the circular bores four and a half feet deep into a seam of coal within a minute.

The machine is 27 feet long and weighs 40 tons.

—Associated Press

—Still less manpower needed.

Assembly by Automatic Machines

By GEORGE H. KENDALL and JERRY HOST

Consulting Mechanical Engineers, Darien, Conn.

Processing engineers are developing techniques of combining standard automatic machine elements — each designed to perform a specific function — into automatic production systems. Standard general-purpose assembly machines are taking their place in this automation movement. Considerations of machine assembly as opposed to hand assembly are herein introduced to management.

MANAGEMENT HAS for the past 10 years been fully conscious of the need to do something basically to balance manufacturing operations against rising cost of production. A rapidly expanding market, production and quality demands, and limitations of hand operations brought about many studies in the field of continuous and special automatic process machinery throughout the country. As a result there has developed an enormous increase in the demand for automatic controls and mechanisms to operate the new process machinery. In the past few years the term 'automation' has been applied to that field of machinery which was for the past 20 years referred to as continuous cycling special machinery and equipment.

The need became acute for automatic assembly machinery in those fields where no automatic equipment was commercially available. Many leading firms with experimental divisions of shop operating organizations have been developing special forms of such machinery for the past 10 years. Those firms not so fortunate as to have these facilities have tried initial steps of their own toward this end. The highly specialized engineering techniques required to handle such complicated problems, which involve a lifetime of study, have limited any great response to fulfilling this need.

Development of Assembly Machines

There are many types of assembly machines that have come into being over the past 20 years that serve single-purpose needs effectively for a wide field of different types of applications as follows:

1. The straight line with individual workbenches.
2. The group bench line.
3. The long straight line of several groups.

4. The circular turntable with hand assembly.
5. The straight line semiautomatic machine.
6. The curved line bottling type of assembly.
7. The overhead conveyor intermittent bench line.
8. The circular fully automatic machine.

Finally, however, basic new machines for the automatic assembly of all kinds of component parts produced in volume have been developed. Such machines can be tooled and retooled for anything desired to be assembled. Management can now plan to realize the goal of major savings by machine assembly of products. This now makes understanding of the subject of sound and practical assembly by machines a must.

Progressive industries, whose products are in a most rapid state of constant improvement and model change, are faced with the vital problem of keeping all of their shop equipment flexible and free from obsolescence. Standard machines for automatic assembly should provide a successful solution for the problem of lower costs for assembly of components, both standard and other elements of special construction.

This article will outline the essentials for full automatic machine assembly of components, instruments or complete machines.

Economics and Investment

There are many major economic gains possible through use of machine assembly. First, and most vitally important in reaching a larger market at reduced cost is increase in productivity per worker. Repeated applications suitable for mechanized assembly show increased productivity of from eight to twenty times that of former hand assembly.

Second, the quality and accuracy of machine

assembly provides a rigid degree of uniformity never before possible in multiple hand operations. In fact, quality control of parts to be machine assembled requires rigid inspection to maintain all within established acceptable limits as the machine controls will otherwise stop operation.

Third, in any national emergency machine assembly enables immediate and adequate production for military requirements. Pilot tooling can be developed and tested on all new items to be ready for quantity output whenever required by an emergency. Assembly machines from any location can be immediately carried by plane to any place in the world where mass assembly needs exist. One assembly machine with one operator can assemble a ten-part unit averaging 20,000 assemblies per shift per day; or handling of 200,000 parts. Such basic assistance to the Military for electric, electronic and mechanical mechanism assembly cannot be overlooked.

Fourth, general-purpose machines for assembly of any kind of product can be purchased as capital investment of general shop equipment and written off over a ten to fifteen year period. The single-purpose machine or special machine carries the same classification as tools and fixtures which require writing off of their entire cost in not over two years in most cases for that kind of investment. This makes a difference in estimating for new equipment where the machine which represents one-third to one-half of the total cost can be written off over ten to fifteen years and only the remaining portion falls into the one to two year tooling category.

Fifth, the earning power of most shops requires the full immediate flexibility of all machines to be ready to produce anything that is to be made in the shop. The assembly machine, in keeping with other machine tools, can be changed from one to another set of tooling within three hours. The single-purpose machine or special machine has to be removed from the production floor and sent to a rebuilding shop to change from one to another limited degree of tooling or must be scrapped entirely.

Sixth, the enormous increase in productivity of an assembly machine over hand assembly operations saves about two-thirds of floor space for any given volume of production.

Seventh, assembly machines provide a basic economic operation of the same degree of importance in a department of manufacture as is held

by lathes, milling machines, grinders or other such processing equipment.

Investment in assembly machines for a fully established department requires broad analysis and real investment in proper equipment, personnel, design or redesign of product for sound and practical machine assembly and in work lot scheduling, inventory and rate of turnover.

Really deep studies are needed to analyze investment in the size of lots produced at one time, inventoried, parts in process and warehouse stock in the light of multiple material handling of every part for every operation in manufacture. The enormous savings, directly realizable as such, of automatic assembly are fully capable of changing ratios found best for hand assembly.

From this very brief outline it becomes clear that due to ever changing design of parts and processes, full flexibility to manufacture all items is essential for all equipment in an assembly department if equipment obsolescence is to be avoided. It also follows that special machinery, with its far greater first time build cost and limited degree of adaptability, will give way to basic standard machine tools, for machine assembly of all kinds of products. Where the standard machine tool is used, in case of product change, only the tooling investment is lost; not the entire machine.

The laws of probability and sensitivity to downtime point clearly to the value of unitized standard machine tools with work in process reservoirs between them for uninterrupted continuous production in the whole department.

The major savings from machine assembly are realized by assembling mechanisms of from 2 to not more than 10 or 12 parts per machine, and of additional machines for semifinal and final assemblies where so required. These savings are in the order of 80 percent of all that it is ever practically possible to realize in normal production.

Attempts at placing more into one machine generally result in a rapid increase to excessive machine cost and a very real risk of spreading downtime to a larger unit of the whole production facility. Flexibility to handle a wide variety of shop assemblies is decreased by the oversized machine making it less attractive for a range of tooling and their excessively higher costs.

Those planning to set up departments of assembly machines should have an initial methods study made of a wide range of potential mechanisms for

their products to determine the average, minimum and maximum number of operations for each assembly that is involved. From this the proper number of stations of the standard machine for assembly can be successfully selected with the important assurance that the equipment will be kept busy after it is installed on the production line.

General-Purpose Machine

A machine assembly department for full general assembly of all company products must provide for the short run as well as the long run and continuous production items. Product model changes require that this equipment be kept fully flexible at all times to assemble all company products; otherwise the company is faced with expensive obsolescence of equipment.

It is of first importance to this subject to clearly distinguish between standard and special machinery. It is generally considered that the special machine is primarily designed and built with its complete electrical controls to perform one-purpose application only. It has its tooling built into the machine, in a manner not flexible to changeover, and with neither the mechanical or electrical functions for handling other purposes. The standard machine is primarily designed and built complete to provide basic functions and controls for a whole range of applications within its capacity. It will not make anything, however, until tooled for each application.

A standard assembly machine can be arranged in stripped down condition, less all attachment tooling, so that it may serve on very short runs of only several hundred assemblies. A large-diameter table is used with operators seated around it with boxes of parts to assemble products as the table indexes. The group action assures fast paced assembly and has no tooling expense for handling, other than the work nests that hold the parts being assembled. This type of machine is ideal for all short or small-run items up to the range of about 20,000 assemblies per run where the full automatic assembly machine with tooled attachments takes over on large-volume runs.

Additional automatic features can be added to the basic machine as production requirements warrant, such features include providing tooling attachments to handle, position and assemble the parts; compressed air and/or electric wiring connections at the work stations; electric sequencing or programming devices to interlock actions at the

work stations. Only through use of portable, easily changeable tooling attachments can a department of assembly machines be sure of meeting demands to machine assemble all company products all the time.

Analysis of Products—Design

In the analysis of company products for the best degree of suitability of present design for machine assembly it is of first importance to top management that they secure a design analysis as to what could be done to improve design to lower manufacturing cost, simplify costs of hand or machine assembly and greatly lower costs of tooling and fixtures essential to produce and assemble the unit. There are many products in manufacture today where such attention could easily cut present costs in half.

Frequently, applications come to light where complicated hand assembly, or complicated compound slide machine assembly, could be almost entirely eliminated by simple design changes that would not alter function of the design in any way. This is particularly so where several subassemblies are to be finally assembled into the complete product.

To illustrate the type of thinking we might recall the first set of blocks almost all of us had as small children where one was dropped within another to make the complete set. They dropped together by a simple single direction motion. They did not require side or cross motions of complicated assembly. In some cases we have forgotten these early basic lessons in sound and practical assembly and fearfully complicated structures have come into being which no sound reason can support; other than that not enough time was granted to the designer. In other cases this basic simplicity has appeared as illustrated by the radio tube, Cannon fittings, light bulbs, etc., that again show this basic trend of design.

Much of the cost of former electronic, electric and mechanical mechanisms will be avoided in future as leading design associations, research symposiums and trade conference papers continue to establish this trend for recognition of simple common sense by the designer to the problem of manufacture, assembly and servicing of the product he has under design.

Analysis of Products—Volume

Research into the market essentials for automatic assembly to meet today's actual production

problems seems to indicate the following points are of importance:

Production Quantity: The present business volume of standard component parts in production from many different industries indicates that a very large percentage of the whole market have quantities of 10,000 to 50,000 per production run, or per day of production. This includes the fields of electronic, electric, mechanical, toy, hardware, appliance, instrument, process, and chemical manufacture.

Repeat Volume: Many plants having these daily volume totals also may have such a variety that they are so cutting up production runs that an assembly size, or part change occurs every day from one to another item. The items, however, usually repeat as market demands dictate on a weekly, monthly, or quarterly cycle basis providing support for tooling costs.

Product Change: In this present market there are many companies with production of simple component units of from two to eight or nine parts that are either national standards or free from style changes for many years at a time. Others in this market, such as the more new and recently established industries, like the electronic industry, are subject to a continual state of style and design change. This places major burdens upon manufacturing organizations to assure a full degree of flexibility of its facilities for manufacture of all company products.

Complex Design: Still others in this production market are manufacturers of more complicated mechanisms, machines or instruments that require a steady uniform rate of production over the years. Their problems consist of many subassemblies that are further assembled to make the complete product, machine or instrument.

Product Quality: In all of these fields of production the need for a more rigid degree of uniformity and freedom from the variables of the human equation are most evident. It is also of importance that the degree of uniformity of all of the parts be kept strictly within the established tolerances set as acceptable for the product.

It is clearly evident from this that any automatic assembly production problem will have a large number of ever changing variables in the production run both within and without the accepted tolerance limits. Most of them will be of dimensional nature of minute changes of size that may or may not affect assembly or later operation of

the product.

In general, machine assembly can be considered highly attractive if:

1. Parts are designed to go together well.
2. Runs of at least 25,000 can be scheduled at one setup time, or there are repeat run advantages.
3. Four or more operations are involved.
4. Two to 12 parts are involved in a mechanism (if more, use more machines).
5. Higher rates of production are desired.

TYPICAL SEQUENCE TOOLING FOR STANDARD GLOBE VALVE

(20 to 40 per minute)

Station No. 1—Feed "Fiber Washer" into work station nest

Index Station No. 2—Feed "Valve Stem" into work station nest over fiber washer

Index Station No. 3—Feed, from under work station nest, "Small Screw" and power drive through fiber washer into valve stem. Feed "Valve Body" into other twin work station nest location

Index Station No. 4—Feed "Bonnet" over stem and spin to bottom of thread at work station nest

Index Station No. 5—Feed "Valve Body Fiber Gasket" into location at valve body at twin work station nest location

Index Station No. 6—Transfer "Valve Stem" assembly into twin work station nest location into "Valve Body"

Index Station No. 7—Spin "Valve Stem" assembly into valve body with torque wrench tool to specifications

Index Station No. 8—Feed "Packing" over stem and push down to location at work station nest

Index Station No. 9—Feed "Packing Nut" down into position and push down at work station nest

Index Station No. 10—Spin "Packing Nut" with torque wrench to specification at work station nest

Index Station No. 11—Feed "Handle" onto valve at work station nest and press down to shoulder

Index Station No. 12—Feed "Brass Screw" into handle and power drive into position at work station nest

Index Station No. 13—Pressure check on valve at work station nest to customer specification

Index Station No. 14—Deliver rejected valves to chute or container

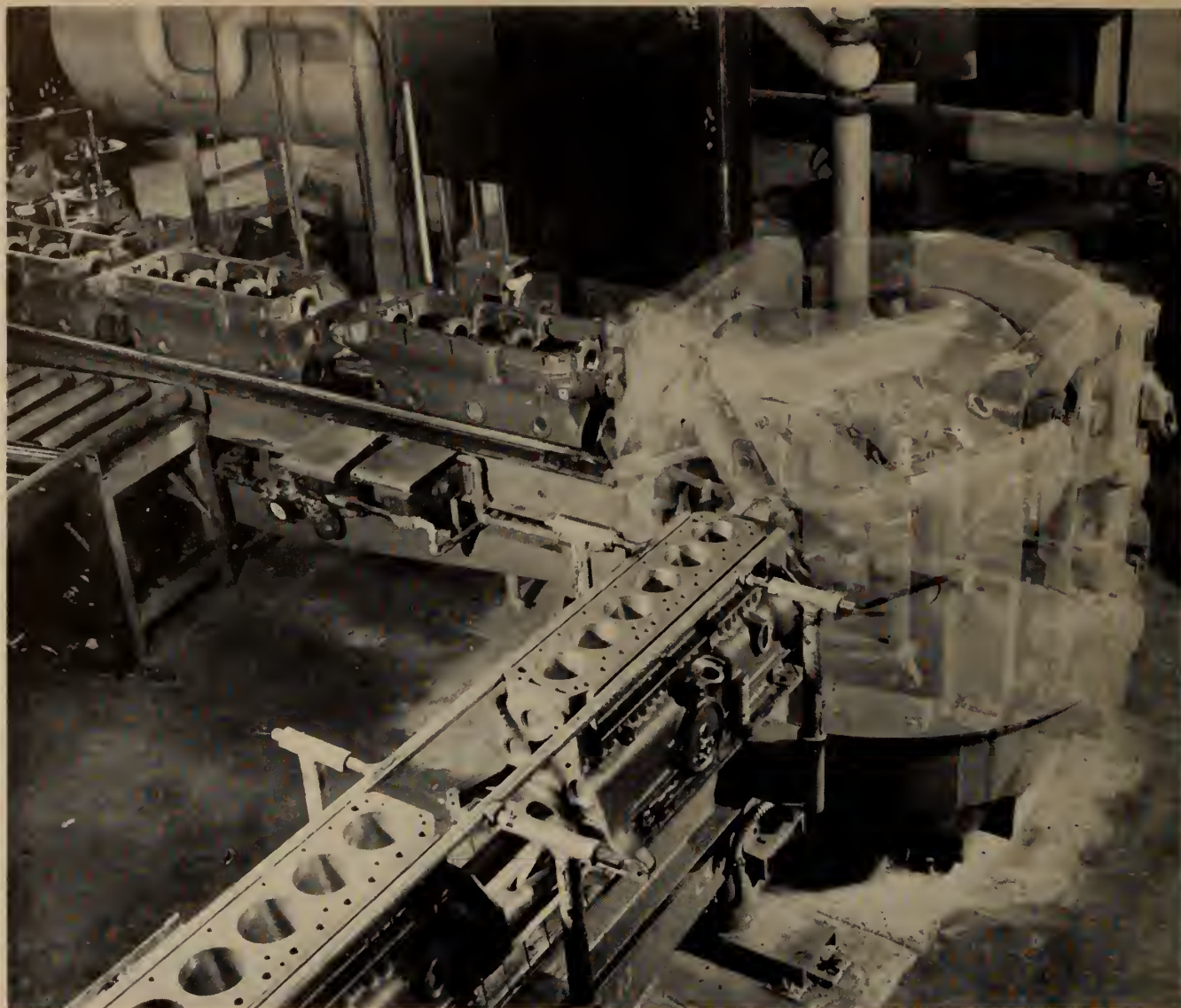
Index Station No. 15—Deliver accepted valves to chute, conveyor or container as specified by the customer

Index Station No. 16—Idle for the present. Would be used when "Drain Cap" item included after conference on tooling method questions

Index

This tooling sequence illustrates a practical machine assembly arrangement of stations to do the whole job on one machine. Practical experience in machine assembly indicates that every fourth station should be a blank to provide a "breathing space" in the complication of machine assembly to assure the minimum of downtime: a basically important fact. Two machines for such an application would be a final recommendation.

—Reprinted from "Automation," May, 1955



This unique two-directional "automation" device turns Ford 6-cylinder engine blocks end for end and revolves them upside down to facilitate motor assembly operations at Ford Motor Company's new Cleveland Engine Plant. The "compound motion" is accomplished with a fast, shockless indexing cycle. The device is typical of many special automation mechanisms installed at Ford's new plant to increase production efficiencies and reduce manual effort of shop employees. Blocks are shown in foreground as they approach start of engine assembly line. Before reaching 90 degree (right angle) turn in line, the blocks are right side up with front end leading. Blocks are automatically loaded into compound turning device which positions block upside down by means of an 180-degree turnover and revolves the block so that rear end leads for easy assembly of camshaft and crankshaft. A succeeding automation shuttle extracts the block from this device and automatically delivers it onto the assembly conveyor at left.

—Photo Courtesy of Ford Motor Company

THE VOICELESS PEOPLES SPEAK

In Bandung, Java, the majority of the world's people were recently represented in an Afro-Asian Conference, called to discuss matters of mutual interest. This strange gathering of men was made up of many races, many nationalities, many religions, many languages, and many social ideologies. They did not speak with one voice nor find much detail

on which they could agree. But the meeting was highly auspicious. The one big point of agreement was that the world's majority of people would no longer submit to an inferior and voiceless status in the affairs of mankind. The Big Wheels of the Western World were as jittery over this Conference as cats in the attic at a canine convention. Such a
(Turn to Page 27)

SAY 'Facism'

Fascism will be a union and conspiracy of business, political, and ecclesiastical interests, to hold and increase their power, in the last ditch defense of the Price System. Their power is being threatened by the growing abundance of material things, and as this abundance, or the threat thereof, increases, the more drastic will be their search for means to thwart it.

THIS ARTICLE was prompted by one which appeared in *National Union Farmer*, July 1954, entitled, 'Revolution from the Right,' by Robert G. Lewis, NUF Washington Correspondent. Part one of this article consists of a review of Mr. Lewis' article, and the second further comments on fascism as analyzed by a Technocrat.

So much confusion exists in current treatment of socio-economic subjects, and in the definition of ideologies, that the whole subject is in a state of chaos. Mr. Lewis' article does little to clarify the situation, and, in fact, adds to the problem by definitions which are faulty. The article is poorly organized, but because it does treat with a subject which is usually given the hush-hush routine, and because it does have some good points, it is worth criticizing. It is very difficult to discuss an article organized as this one without quoting it directly, but such quotation will be severely limited here, and the reader is referred to the article.

Mr. Lewis writes, 'A totalitarian revolutionary movement is being developed in the United States.' The American people are only dimly aware of the existence of this threat to their traditional way of life. The movement 'closely parallels' the totalitarian movements of nazism, fascism, and communism.

To quote directly, 'The contemporary American totalitarianism is being led and developed primarily by wealthy business interests for the purpose of solidifying and extending their economic and political power. In this respect it closely follows the example of Hitler's Nazi movement, which won support from the masses for the ambitions of German cartels and financial institutions. It is even more similar to the Corporate State of Mussolini's Fascism. It is similar also to Communism, which seeks mass support for increasing the power and privilege of the Communist bosses.

'For lack of a better name, the contemporary American totalitarianism might be called "Corporate Socialism"—which is fairly descriptive of its nature. It has not yet developed to the point of naming itself.'

Right here, let us stop and do some clear defin-

ing. To call totalitarianism 'socialism' is erroneous, false, misleading, deceptive and confusing. A look in the dictionary will set us straight on that. Socialism is therein defined as public ownership of the means of production. Does this definition also fit totalitarianism? Obviously not. A German acquaintance of mine, during the period of nazi power, once said, "Ja, Germany got socialism." Although the name 'nazi' is derived from words in the title of the Nationalist Socialist Party of that time, it is quite obvious that the label did not accurately describe what was in the box. If Germany had socialism, then the USSR is the first theocracy of any size in the world.

There is only one correct name for the totalitarian monstrosity he describes—'Fascism,' and it is a combination of economic, political and ecclesiastic phases. Mr. Lewis, however, fails to mention the ecclesiastic alliance. He is correct in stating that the movement, which we shall now call 'corporate fascism,' seeks to increase the privilege and power of the leaders.

Fascism is a condition wherein national gangsterism has developed, an extreme manifestation of the cooperation of business, government and the clergy to hold back social change. It can be compared to a cancerous growth in an animal body, in which a group of cells start to expand at the expense of the other cells of the body to the point where they are not functional in the body and must be removed to prevent the death of the entire organism.

In the process of establishing fascism, it is the practice to create or designate an object for hatred and disapprobation. All must follow the lead and show proper disdain for the object, until finally the state is reached where any censure of the fascistic clique is related to the object. Hitler held up the Jews as the objective for hatred; communism too, has its scapegoats in the form of capitalists, and the so-called democracies have theirs in communists. A 'horrible example' serves to transfer the attention of the average man from his own trouble, and focuses his attention on an imaginary danger, pro-

vides at least a negative ground for unity, and gives a means of controlling the actions of men through fear by relating their thoughts to the forbidden object.

According to Mr. Lewis, corporate fascism is moving unmistakably in the direction of a cohesive movement, with recognized leaders, increasing agreement on ideology, and a widening pattern of political methods to smother opposition. These are the attributes of totalitarianism, Mr. Lewis says.

"The slogan 'creeping socialism,' coined by the electric utility lobby, has a very similar purpose: to substitute a new, un-American item of doctrine for the time-honored standard that has prevailed. Public power has a venerable place in American life: among the very first power systems in America were publicly-owned as well as private plants, and public ownership of utilities was common throughout the country half a century ago. The utility propaganda seeks to establish a false image of history in the public mind, to make it seem that public power is an alien un-American development sponsored by subversive elements.'

Mr. Lewis also says, 'Perhaps the most extreme example of the un-communism approach toward a radical new ideology for America has been promulgated by Admiral Ben Moreell, chairman of the board of Jones and Laughlin Steel Corporation, and the man chosen by the administration to head the Hoover Commission's task force which is planning the reorganization of government activities in the fields of electric power and natural resources. Moreell condemns American institutions older than the Declaration of Independence as 'communistic'—including public roads and free public schools.'

To resume paraphrasing, Mr. Moreell is apparently a reactionary to outdo all others, past or present, but others may surpass him in the future. He regards everything, from income taxes to public ownership of any service, to be communistic ideas according to Karl Marx. (Admiral Moreell is, of course, a Roman Catholic.)

The commission, through its research organization has coined such terms as **free private enterprise**, a phrase composed of three words highly respected in American tradition. The NAM felt that the term 'capitalistic system' had begun to be associated in the public mind with a disagreeable odor, and that therefore a new name should be used even though the stench was the same. The term does not, of course, describe the present corporate aggregation, because the units of organization have become

so large and powerful, their control so interlocked and concentrated in the hands of a few individuals. Freedom to play the game on that scale is open to only a few of the corporate giants; smaller ones will be eliminated by mergers if not by bankruptcy.

Mr. Lewis says that the process of capital formation has been primarily 'socialized,' and here again his choice of words is unfortunate and misleading. He distinctly says that those who contribute to corporate financing, with the exception of the stockholders, have no voice in the control of their investments. He cites the April 1954 issue of Survey of Current Business, published by the Department of Commerce, for his contention that the source of funds is broad. Owners (stockholders) contributed, in the eight years 1946 to 1953, just 6% of the total of \$249 billion of capital funds or only \$15.3 billion. The customers of business, which is the largest source of capital, contributed 65% of the total. Here, there is a very interesting observation. Profits plowed back into the business are the traditional, legitimate source of capital funds, but now comes **price-fixing-by-monopoly**, and in the absence of prices set by an uncontrolled market, and profits made in fair competition, profit is in reality a tax levied on the consumer, and this consumer contribution becomes a source of capital for which the contributor is given no voice in control or any certificate of ownership.

Totaling the Funds

The next source of capital funds is lending institutions, whose share is 18% of the total, and whose funds are gathered from the small investor and the holder of life insurance policies. To complete the picture, business credit of one organization to another amounted to 10%, and brings the percentage accounted for to 99.

Mr. Lewis says, 'The authority of government is used also to help the corporations obtain capital funds from the public. Tax-amortization subsidies, guaranteed profit clauses in defense contracts, government-financed factories, price support buying from mining companies, subsidies to shiplines, airlines, and publishers, the huge government interest subsidy to the banking system, and a host of other contributions to the corporations have substantially eliminated the element of "risk" from modern corporate big business.'

The revolution is virtually completed, and the new faction is seeking to consolidate its position by extending its power and control to the political and intellectual fields. Their aim is to control the think-

ing and action of the people in order to thwart the traditional political correctives for such a situation, and they feel that they must have control of the government.

No Collection of Crackpots

Quoting Mr. Lewis, 'The Corporate Socialist party is no collection of mere crackpots. It is endorsed with varying degrees of completeness by the Chamber of Commerce of the U. S., the National Association of Manufacturers, National Associated Businessmen, and the Farm Bureau. The Foundation for Economic Education, which is the movement's chief ideology factory, has a board of trustees that reads like a stud book of the Wall Street fraternity. Men highly placed in the Eisenhower Administration, including ex-President Hoover, head of the planning commission for reorganizing the entire government, and Moreell, chairman of that commission's main task force, are last ditch advocates of fundamental aspects of its doctrine. President Eisenhower himself has accepted the label 'creeping socialism' for TVA. A significant minority of U. S. senators and representatives espouse even its most extreme dogmas.'

In conclusion, Mr. Lewis states that in spite of the ominous signs of trouble, the Constitution of the United States will enable the people to weather the storm 'if they keep their eye on the ball.'

Mr. Lewis has written a very unusual article, and it is strongly recommended that the original be studied to get a true picture of it, because only a very condensed version of it was attempted here. It is unfortunate that he uses the name 'socialism' instead of the more fitting 'fascism.' The work could well have been expanded into book length by developing some of the themes and organizing the material into a more readable whole.

Fascism Disqualified

Technocracy classes fascism, insofar as it may be applied to American conditions, as only another phase of Price System operation. Fascism is disqualified as a mode of operation for North America once a state of abundance has been attained. Why? Because the Price System itself will prove unable to distribute the goods and services which the technological complex can provide. All phases of Price System operation will be futile.

Why then, should we be concerned about the tendency toward fascism on this continent? As physical conditions are progressing toward the inevita-

ble impasse, fascism may be tried, and the damage done under fascistic control may be considerable and perhaps irreparable.

How will fascism come to America? It will not come with a uniformed dictator and a marching group of fanatics. That may be a later phase of the movement, but it is too obvious: the people will not be taken in by it. But it can come insidiously, by stealth, a little concession for security here, a little yielding to expediency there. 'A little slumber, a little folding of the hands to rest...'

It goes without saying that the American people do not realize the danger, or suspect the direction from which the attack is coming. Few can even give an accurate definition of the term 'fascism.' They conceive of it as it existed in the scarcity economies of Europe and Asia some fifteen and twenty years ago. The tactics and strategy to be employed against Fortress America will be different in their outward appearances. Even now, fascism advances behind a smoke screen of anti-communism.

Triparte

Fascism will be a union and conspiracy of business, political, and ecclesiastical interests, to hold and increase their power, in the last ditch defense of the Price System. Their power is being threatened by the growing abundance of material things, and as this abundance, or the threat thereof increases, the more drastic will be their search for means to thwart it.

Business is being concentrated more and more in the hands of a few large corporations; the number of stockholders is only a small percentage of the population, and the number who hold significant amounts of stock is still smaller. The political tie-up comes with the subservience of elected representatives to the wishes of big business, as exemplified by the passage of legislation to give away publicly owned power facilities. Not the least of the political forces is the attempt by reactionary clericalism to influence both voters and elected representatives.

According to Seneca, early Roman philosopher, 'Religion is regarded by the common people as true; by the wise as false; by the rulers as useful.' Technocracy is non-religious (not anti-religious) and will not permit any intrusion of religion or the controversies thereof into the affairs of the organization. We do not regard religion as useful in the sense Seneca meant, but we do suspect that other interests extant on the North American Continent do so

regard it. Technocracy does not propose that the Continental social control exercise any restraint or coercion in the matter of the personal religion of the citizens.

We feel that a man's personal religion is something between him and his God, and not to be tampered with. We take the stand that what any group of people does, organized as a political and economic force, is of great concern to the rest of the people and consequently to Technocracy Inc. That is particularly true where the leadership of that group is foreign to this Continent, and wields great political power in international affairs, and where it has shown itself to be aggressive and ruthless in meddling in the affairs of areas where it may have influence. The hierarchy of the Roman Catholic Church, and the Vatican, which is the physical and political extension of it, does exercise great political power on an international scale, and it has a history of aggressiveness and meddling in the affairs of other areas. We regard it as a power to be reckoned with because it is capable of using the religion and the religious organization which it has expanded over the centuries, to influence the individual member of the Catholic Church who resides on and is a citizen of the North American Continent.

Allegiance

We do not know to what extent Catholics in general would place allegiance to the Vatican above allegiance to their country, but we consider those who would to constitute a fifth column. Since Catholics number many millions on this Continent, we cannot doubt that this fifth column is a present and very dangerous threat to our way of life and our sovereignty. It outnumbers the Communist Party members by a very large factor and is infinitely more dangerous.

When churches become political-economic pressure-group organizations, they can expect opposition from those whose ideas, and economic interests may differ. This opposition may, by extension, be carried over to the religion itself, so the church has defeated its primary purpose.

We quote from 'America Must Show the Way,' a Technocracy pamphlet—'FASCISM . . . Fascism, in its various forms, represents the final consolidation of economic, political, and ecclesiastical powers for a last desperate stand in defense of the Price System and its scarcity values. Its structure consists of a small oligarchy of wealth and power, which wields arbitrary authority over all phases of life of

the population, while the great majority of people are leveled out at a low standard of living, toiling at small, hand-tool operations. Fascism is not intellectual, but relies upon emotionalism, ignorance, fear, and superstition for its popular support. It does not have a long range objective, other than to keep the ruling oligarchy in power. Its policy is one of expediency, rather than one of planned operation. It stands ready to use any form of trickery, suppression, or force which seems expedient to preserve the existing economic order. Fascism is suitable only to conditions of scarcity and to a people long conditioned to suppression and prejudice. It is especially suitable to conditions wherein the majority of the people is still on the soil.

Examples of Fascism

'The second world war has revealed to us the operating characteristics of instituted fascism and some of its capabilities. Italy, Germany, Spain, and Japan have offered us examples of what to expect from fascism once it gets established in power. But, these examples are very nice and restrained compared to what would transpire should fascism be instituted in an area of high-energy conversion.'

From 'Continentalism, The Mandate of Survival,' another pamphlet published by Technocracy Inc., we quote the following, 'Fascism was used in Europe as an antidote for Bolshevik Communism. Fascism failed primarily because it did not provide a new social design for the collective organization of mankind and the means whereby they live. Fascism failed because it was in essence a national sadism for the perpetuation of privilege and the status quo.'

Again, in 'Make Way For Social Change,' an official Technocracy publication, we have the following, 'Here are two concepts through which America's future is viewed. One of these is the ideology of fascism—the ideology of the bankers, big business, the politicians and the reactionary ecclesiastics. This concept idealizes a downward progression of society to a lower energy state, where the bulk of the population is frozen to hand-tool operations and a position of immobility, with only a small fraction of the people deriving enough energy from the system to be fluid—this being the ruling oligarchy. This fascist social state, could it be achieved, would be on the same level as that on which humans existed before the invention of the steam engine. It is yet to be seen whether Americans are suckers enough to fall for the glittering generalities of the

fascist propaganda. Some of the generalities which they use as bait are these: 'full employment' (at hand tools); 'social security' (like that of the slave and the serf); 'freedom of religion' (like in Spain); 'freedom from fear' (fear of abundance); 'freedom from want' (subsistence); and 'freedom of speech' (so long as you avoid controversial subjects). (The parenthetical remarks are our translations.)

A brief review of Avro Manhattan's book, 'The Vatican in World Politics,' reveals the following pattern: The Vatican is a state with all the rights and privileges of any other, but has no army. The Pope is head of the state as well as the religious organization, and keeping the long-time objectives of the Church in mind, he manipulates the facilities of the Church, now playing the temporal organization and strategic position, and now the spiritual, into an orchestration of formidable temporal power. His is a policy of expediency, and to him the end justifies the means. The evils to be destroyed are to him, secularism, socialism, liberalism, democracy, communism, atheism, and heresy. The USSR is then, automatically his chief enemy, and this enmity and hatred has had a profound effect on world politics and has been one of the prime causes of world wars.

The Vatican, the Hierarchy of the Catholic Church, through the Catholic political parties in Germany, maneuvered the Nazi Party and Hitler into power, and then caused Germany to invade Poland as the first step on the road to attack the USSR. It was the latter's move (they are not blind to the machinations of the Vatican), and they moved into Poland and met Germany half way.

Poison of Vatican Intrigue

Hitler, after declarations of war by Britain and France, was reluctant to continue on into Russia until his Western front was secure. The Vatican was using all its influence in France to prevent that country from attacking from the West (you remember the 'phoney war,' the 'sitzkreig,' where the western front was inactive as the poison of Vatican intrigue paralyzed and inactivated the French). In the meantime the Nazis invaded Norway, and then, unable to get a guarantee of freedom from attack on the west, went around the Maginot Line, completely demoralizing the French and isolating the British. Then Hitler, with his Western front secure for the time-being at least, attacked Russia to fulfill his

obligation to the Vatican, to drive Communism beyond the Urals thus eliminating it as a world power and a dangerous ideology.

As World War II developed, and the Pope began to realize that his plans had backfired into the greatest snafu in history, he had a nervous breakdown, as well he might. For Britain and the United States had become 'allies' of the USSR, and thus were fighting (albeit reluctantly) on the 'wrong side' (from the Pope's standpoint), against Catholic Italy and Germany. What an unholy mess!

As the defeat of Germany became inevitable, the Vatican again used its influence to soften the blow, and produce peace without victory. The first objective was now to eliminate Hitler, but Hitler would not resign at the Vatican's suggestion, to make way for a regime with whom the allies could make a less vindictive peace, and it seems the Vatican then tried to eliminate him by assassination, unsuccessfully. It was about this time that the Pope had his nervous breakdown.

Not the Object of Destruction

The war then proceeded to its end, but it is noticeable that although the armies of Fascism were to be 'destroyed,' never was fascism itself designated as the objective of destruction by the West.

The Vatican and the hierarchy, according to Avro Manhattan, were instrumental in promoting Mussolini's rise to power, and supported, acclaimed and praised the fascist regime. A similar situation prevailed in Germany later with the rise to power of Hitler. The Vatican was, however, unable to completely control either the 'atheist' Mussolini, or the Catholic Hitler, and it is interesting to observe that when it became expedient for the Vatican in furthering its ends, to jettison Mussolini and Hitler, it was done without scruples. Mussolini was adroitly thrown to the wolves, when the Vatican withdrew its support and the king ousted him as prime minister. It is documented that the Vatican was instrumental in the attempted assassination of Hitler.

It is further interesting to note that, according to Manhattan, many Catholics in Italy and Spain objected so strongly to the machinations of the Vatican that they left the Church, and at other times actively opposed the wishes of the Pope and the encroachment of fascism. This is an encouraging sign, which leads one to hope that in spite of anathemas and threats of excommunication hurled by the Pope, a substantial percentage of Catholic citizens will remain loyal to the country of their citizenship.

Let would-be dictators beware of alliances with the Vatican; so far, Franco lives, but he is more the puppet than either of his former confederates, and so far the plans of the Vatican are working out very, very well.

If World War II was a Vatican snafu, it appears that their present plans have been laid with more care and the probability of success is greater. But then, perhaps the plans of the thirties appeared auspicious then. Be assured, the objective of the Vatican to crush 'Godless Russia,' has not changed: now they have different and more powerful tools, the United States of America and Canada allied with lesser powers. No longer are U. S. and the British Commonwealth on the 'wrong side.' The fact that the adversary has likewise enlarged and become more powerful does not alter the determination of the Vatican in the least, although its strategy may be altered by the fact.

CONTENTS

No. 180 (Vol. XIX)	July, 1955
	Page
The Force of Automation	2
The Course Is Set	3
Parking Our Autos	10
Nature Pays Off—With Dust	11
Have You Observed	13
Developing Trends	14
Assembly by Automatic Machines	16
The Voiceless Peoples Speak	20
Say 'Fascism'	21

Editorial Board.....George Kellogg,
Harry Briggs, Ruth Berge
Business Manager.....Rina Corcoran
Circulation Manager.....Lucy L. Barnes

Printed in U.S.A. by volunteer and union
labor on Technocracy's own press.

TECHNOCRACY

North America's Only Social Dynamic

WHAT?

Technocracy is the only North American social movement with a North American program which has become widespread on this Continent. It has no affiliation with any other organization, group or association either in America or elsewhere. The basic unit of Technocracy is the chartered Section consisting of a minimum of 50 members and running up to several hundred. It is not a commercial organization or a political party; it has no financial subsidy or endowments and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section. Members wear the chromium and vermilion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHEN?

Technocracy originated in the winter of 1918-19 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934 Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundation of the present Continent-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses, or rebirths. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHERE?

There are units and members of Technocracy in almost every province in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces. Members of Technocracy are glad to travel many miles to discuss Technocracy's Program with any interested people and Continental Headquarters will be pleased to inform anyone of the nearest Technocracy unit.

WHO?

Technocracy was built in America by Americans. It is composed of American citizens of all walks of life. Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this Continent. Membership is open only to American citizens. Aliens and politicians are not eligible. (By politicians is meant those holding elective office or active office in any political party.) Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—so long as you are a patriotic American—you are welcome in Technocracy.

The Vatican has waged a campaign of propaganda and hatred, with the objective that the United States together with her allies shall annihilate communism. In this campaign, the Vatican is virtually unopposed, except by members of Technocracy and a few others. Protestantism is but a name; who protests the activities of the hierarchy today? Apparently the appeal of the hierarchy for 'tolerance' has been effective. A man scarcely dares think for fear of being called a red, and it has come to the point where 'you are either a Roman Catholic or a Communist.'

Fascism must be combatted before it has a strangle hold on the social and political organization; once it gets that hold, it may be too late, for fascism has not hesitated to liquidate its opponents. The individual can do little to combat fascism alone; he must organize.

The one outstanding organization of the North American Continent, which is militantly opposing fascism is Technocracy Inc. There is little doubt that an economic crisis is coming, and in that crisis, the forces of fascism may see their opportunity. Then, the American people must choose between scarcity and abundance, chaos or science, fascism or Technocracy's plan for the operation of the entire Continent to produce and distribute an abundance of goods and services to all the people.

In the fight against fascism, Technocrats have a powerful ally, Technology; for Technology is actively destroying the roots of fascism, which are scarcity, poverty, human toil.

There is still time to choose between abundance and chaos. Your decision to join the organization of Technocracy Inc. will increase the probability that there will be victory over fascism in our time.

—Roger N. Evans, 12247-1

The Voiceless . . .

(Continued from Page 20)

'revolting development' was never foreseen nor intended by the myopic statesmen of the Master White Race ideology.

Let us not be deluded into supposing that the Master Race or Chosen People philosophy is the sole property of one race or one area. Almost any race, creed, or area on the earth could have promoted it with equal facility if it had 'gotten there' first. And some others probably would have administered with even greater brutality and ruthlessness than

has the White Race. The important thing to observe is that world dominance by one race is now over and that, if the White Race is to escape the fallout ashes of vengeance, it must employ far greater statesmanship.

Whatever else may be said against Soviet statesmanship, it must be admitted that it behaved 'correctly' with reference to 'Bandung.' On the other hand, the charges brought up at the Conference by delegates of certain 'pro-American' mercenary nations to the effect that 'communism' was as much of a colonialist conspiracy as the Imperialism of the West was in very bad taste. It must be stated here (as a matter of record, without approval or condemnation) that Soviet Communism has never adopted the colonial policy of the West; rather, to the contrary, it has fostered the internal development and industrialization of every region over which it has extended its suzerainty. The Russian-type policy of expansion may have some other name, but it cannot be called colonialism; and one does not advance his position by 'calling names' that do not apply.

—Techno Critic in Technocratic Trendevents

SUBSCRIPTION ORDER

To: THE NORTHWEST TECHNOCRAT
2208 Eighth Avenue
Seattle 1, Washington

Enclosed herewith is \$.....to cover.....
subscription(s) to Technocracy's Magazines for.....
years.

All Three Magazines, 12 months, 12 issues, \$3.00.
(All three publications are quarterlies, but so
rotated that one appears each month.)

THE NORTHWEST TECHNOCRAT
TECHNOCRACY DIGEST
THE TECHNOCRAT

☐ This is a NEW subscription.

☐ This is a RENEWAL subscription.

Name.....

Address.....

City.....Zone.....State.....

(or) City.....Province.....

(Foreign rates, other than Canada, Mexico, and U. S. territories,
20% (60c) additional to above rates.)



As technology becomes more generally applied to human functions and as it is made more and more automatic, the distribution of goods can no longer be based upon man-hours of human participation. Earned income will no longer suffice to effect an adequate distribution of the things produced, and industrial stagnation must inevitably follow. An abundance can be distributed and enjoyed by the population of North America only on the basis of a high standard of unearned income being furnished to all citizens of the Continent.